

103  
**ECONOMIC STIMULUS PROPOSALS AND  
INFRASTRUCTURE INVESTMENT**

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Y 4. AP 6/2: S. HRG. 103-34

Economic Stimulus Proposals and Inf...

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BEFORE A

**SUBCOMMITTEE OF THE  
COMMITTEE ON APPROPRIATIONS  
UNITED STATES SENATE  
ONE HUNDRED THIRD CONGRESS**

**FIRST SESSION**

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**SPECIAL HEARINGS**

**The Benefits of Transportation Investment (S. 249)  
Economic Stimulus Proposal (H.R. 1335)**

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Printed for the use of the Committee on Appropriations



U.S. GOVERNMENT PRINTING OFFICE

WASHINGTON : 1993

65-152 cc

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For sale by the U.S. Government Printing Office

Superintendent of Documents, Congressional Sales Office, Washington, DC 20402

ISBN 0-16-040735-4



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# ECONOMIC STIMULUS PROPOSALS AND INFRASTRUCTURE INVESTMENT

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WEDNESDAY, JANUARY 27, 1993

U.S. SENATE,  
SUBCOMMITTEE ON TRANSPORTATION  
AND RELATED AGENCIES,  
COMMITTEE ON APPROPRIATIONS,  
*Washington, DC.*

The subcommittee met at 10:04 a.m., in room SD-138, Dirksen Senate Office Building, Hon. Frank R. Lautenberg (chairman) presiding.

Present: Senators Lautenberg, Harkin, D'Amato, Domenici, and Specter.

## NONDEPARTMENTAL WITNESSES

### THE BENEFITS OF TRANSPORTATION INVESTMENT (S. 249)

#### OPENING STATEMENT OF SENATOR LAUTENBERG

Senator LAUTENBERG. I call this meeting of the Transportation Subcommittee of Appropriations to order.

We welcome a new member to the subcommittee, Senator Arlen Specter from Pennsylvania. We would have everybody take their seats, please.

This morning we kick off the Transportation Appropriations Subcommittee's hearings for this first session of the 103d Congress. Since this committee last met, in case you did not notice, there have been a few changes. We have a new President and a new administration. The American people have spoken clearly.

In those memorable words, they said, and I quote, "It's the economy, stupid!" I do not know who they were talking to, but I think they were talking to all of us.

The American people want an end to the political gridlock that has kept government from acting to meet critical needs. As part of that change, President Clinton has focused badly needed attention on the Nation's need to create investment in order to get our economy moving again.

First, I am introducing new legislation to get that process, the process of investment, promptly underway. And to begin to deliver on that promise to invest in America, a program we have the Supplemental Transportation Appropriations Reinvestment to Upgrade Productivity [STARTUP].

This legislation has three goals, to provide a boost to the economy, to create jobs, and to improve in the short and the long term

our infrastructure. Accordingly, the bill would target funds in three areas where there are unmet needs and where we would see an immediate benefit.

First, it would fully fund the Intermodal Surface Transportation Efficiency Act [ISTEA], providing \$2.9 billion for highways and \$1.4 billion for transit programs that were authorized originally by ISTEA.

Second, it would provide \$1.9 billion for the Airport Improvement Program, with \$400 million of that reserved for economic development at small airports. Currently, there is an estimated \$6 billion in underfunded AIP applications pending at the Federal Aviation Administration.

Third, the bill would expand and accelerate the funding of passenger rail service in this country, providing \$540 million for Northeast corridor improvements and Amtrak's capital program.

In total, we are looking at \$6.7 billion, which, as today's witnesses will attest, could be obligated within the current fiscal year. And that could result in about 300,000 jobs.

Now we have heard from some that, since the deficit picture has worsened considerably, an economic boost maybe ought to be deferred or perhaps is not needed because we are seeing signs of improvement in the economy.

But when I see 8 percent unemployment in a State like New Jersey, I do not see recovery. When we hear the news that we heard just this morning about layoffs in the aviation industry, about Sears Roebuck, about IBM, about other companies shrinking, I do not see the kind of recovery that would encourage me to believe that we are going to get people back to work.

I see us continuing, unfortunately, a downward spiral, being unable to compete in a global economy because we do not have a solid base for economic growth. I see us missing out on opportunities to open up new markets through investments in transportation, which makes us less competitive. I see us missing out on opportunities to meet the requirements of the clean air law, which makes us further dependent on foreign imports of oil. I do not want to see our country continue to lose its competitive edge and miss out on those opportunities.

Transportation investment is highly productive. It generates about a two-for-one gain in gross domestic product and could create as many as 50,000 jobs per \$1 billion of investment. Last year, we also began our hearings with a discussion of my proposal to provide supplemental spending for various transportation programs. At that time, the proposal ran right smack into gridlock and it prevented us from making decisive economic decisions. It also ran into the nay-sayers who claimed that it was unnecessary to help a recovery because it was already underway.

We are here today because, in spite of some major changes in the last year, two things remain the same. First, our economy still needs a boost. Second, our infrastructure is still suffering from decades of disinvestment.

Over the next several days, President Clinton will be making decisions on the scope and content of his economic plan. And I hope that today's hearings can help him and his administration make the right decisions. We will be hearing about the benefits of short-

term transportation stimulus and the ability of the public and the private sector to translate supplemental funding into productive investment and jobs.

We will also focus today on the benefit of transportation investment that has not been recognized as fully as it should be. And that is through investment in transportation, we can promote the development of new industries and new technologies.

These new industries create jobs here at home and open up export opportunities for us. For example, as a result of this subcommittee's insistence on funding Amtrak's capital programs, one company, Morrison-Knudsen, has made a significant capital investment of its own. And for the first time in decades, railcars will be built here in the United States. And we will hear from them later in detail about this.

Similar stories will be told about the Intelligence Vehicle Highway Systems [IVHS] Program and the major procurement programs at FAA. In each of these cases, Federal initiatives have led to private sector investments by prominent American businesses. They show that transportation investment not only creates jobs in the short run, but also generates long-term economic opportunities.

I look forward to working with the administration and with all the members of the subcommittee to help forge a transportation plan that works for the people of this country. And I look forward to working with Secretary Peña and others in the coming days to promote more investment in our infrastructure for both long- and short-term benefits.

#### PREPARED STATEMENT

At this point, I would like to submit a statement by my colleague from Tennessee, Senator Sasser, who was unable to join us today. [The statement follows:]

#### STATEMENT OF SENATOR SASSER

Good morning, I thank Chairman Lautenberg for convening this first hearing of the Transportation Appropriations Subcommittee in the 103rd Congress. It hardly seems almost a year ago that this Subcommittee met to discuss Transportation Start-up legislation. Yet one year later, again we meet to discuss the economy and the beneficial role of transportation investments. The focus, then and now, is jobs.

Earlier this week, Dr. Robert Reischauer, Director of the Congressional Budget Office, testified before the Senate Budget Committee which I chair. Dr. Reischauer came before that Committee with some rather sobering news. The nation's deficit is not only enormous, but, I'm sad to say, it is growing.

Despite some positive post-election economic indicators, any celebration regarding the economic recovery would, at this time, be premature. It is not enough to create jobs. Ultimately, the long-term economic growth and strength of this nation will depend on the quality of those jobs created. The upswing in temporary employment, while certainly welcome, is not the kind of high-wage, full-time employment that can spur long-term growth and consumer confidence.

For all of the signs that the economy is slowly headed in the right direction, there are counter signals that we have yet to turn that critical corner on the recession. The recent announcement by Sears & Roebuck that it will cut some 50,000 jobs in 33 states, this in addition to the 48,000 jobs that have been cut since 1990, continues an all too ominous trend. All too often, reorganization and restructuring have served as fragile euphemisms for impending plant closings and layoffs.

There is no shortage or variety of opinions on how to turn the economy around. Prominently, and I think rightfully, discussed in this context is an increase in investments in our nation's infrastructure. The Clinton economic proposal, "Putting People First" initially called for an investment of \$20 billion per year to bolster our nation's highways, airports, railroads and bridges. Most experts estimate that for



every \$1 billion spent on highway maintenance alone, some 40 to 50,000 jobs would be created, one-half of which are directly related to construction.

Increased public investment in our infrastructure, while not a panacea, offers both a short-term stimulus and an avenue for sustained long-term economic strength. Equally important, an increased commitment to the national infrastructure could effectively begin to reverse a two decade long disinvestment trend which has not only slowed America's mobility, and impeded the efficient flow of people and goods, but also undermined our nation's competitiveness. In short, carefully targeted expenditures on the vast infrastructure network can be a vital investment in our nation's long-term economic health and well-being.

I believe that today's hearing can provide valuable insight and focus to the economic challenges that lie ahead. Again, I commend Chairman Lautenberg for his leadership and direction in this area, and I look forward to hearing from our witnesses.

#### STATEMENT OF SENATOR SPECTER

Senator LAUTENBERG. With that, I would ask Senator Specter if he has a statement that he would like to make.

Senator SPECTER. Thank you very much, Mr. Chairman. I first thank you for your welcome to this subcommittee.

I have been on the Appropriations Committee for all of my 12-plus years in the Senate and have elected this year to serve on this subcommittee, because I think transportation is a matter of enormous importance today, as we direct our resources to the development of the infrastructure.

I think these hearings at the outset of the 103d Congress are very, very important. I have introduced sense of the Senate resolutions which have been enacted in the past, calling for the highway trust fund to be used solely for the purpose for which it was created and not to be diverted to other Federal purposes.

This is a fund created by user fees and it is intended for specific purposes, and regretfully it has been diverted. If that were done in the private sector, it would be a fraudulent conversion to use moneys for a purpose other than that for which they are intended.

And I am hopeful that the Congress will move ahead and will insist that the trust fund be used for infrastructure development, because there are substantial funds in the highway trust fund which are not used. And when you have a unified budget, with less that has been appropriated than has been authorized and the development of the infrastructure would yield tremendous dividends in the development of commerce and industry in the production of more jobs.

For a very brief reference or two, I note that last year \$20 billion was authorized in the highway bill, but only \$18 billion was appropriated. And we have an existing need for at least \$8.5 billion which could be utilized immediately on the Nation's highways and bridges. And that is especially important when you take a look at the fact that 40 percent of the nation's 550,000 bridges are rated as either structurally unsound or in need of major repairs.

Similarly, in mass transit, authorization was set at \$5.4 billion, but only \$3.8 billion was appropriated. And in the aviation line, there is some \$1.3 billion which could be used immediately. And these funds have been allocated through the user's fees and they ought to be expended. And they would aid industry and business and would produce immediate jobs.

I regret that other commitments will prevent my being here to hear these very distinguished panels. I note panel 1 has the distinguished president of the Building and Trades Council, Mr. Robert Georgine and Mr. Peter Wert, the chairman of the highway divisions of the Associated General Contractors and Tom Downs, who is now commissioner of the New Jersey Department of Transportation, used to be a D.C. official.

And I will not go through the entire panel list, but I will have staff here and I will follow this issue very closely. And I am committed to supporting inquiries to appropriations and inquiries to expenditures for the infrastructure, because I think it is a very sound capital investment and we have the money to do it.

Thank you, Mr. Chairman.

Senator LAUTENBERG. Thank you, Senator Specter.

Obviously, the record will remain open for written questions and anything that you or your staff have we will be pleased to submit and ask the witnesses to respond promptly.

Senator SPECTER. Thank you.

#### PANEL ONE

Senator LAUTENBERG. We are going to call the first panel now. Thomas M. Downs, commissioner of the New Jersey Department of Transportation; Robert Georgine, president of Building and Construction Trades, AFL-CIO; and Pete Wert, the chairman of the highway division of the Associated General Contractors. We welcome all of you.

To familiarize you very quickly with the rules of the subcommittee, we ask that you limit your oral testimony to 5 minutes. We will take your full written testimony and include that in the record. We have a timer. It will be red at 5 minutes. It is consistent with traffic rules these days. We allow you to go past the red light a little bit, but the red light no longer means stop, it means speed up. But our tolerance runs out at the end of about a minute or so after that, in fairness to the other witnesses.

Since this is just a coincidence and Tom Downs is from New Jersey, he will go first. We welcome Commissioner Downs as we do all of you, each bringing a special perspective of the problems and the opportunities connected with transportation investment. We are delighted to have you here. We heard in my opening remarks that I am making a case for transportation investment. And I think it is supported generally; obviously, we want you to be objective in your presentation. And we will make certain that we take the information that you provide and include it in our development of the transportation bill.

We are a little concerned as you all know by the seeming reluctance to continue ahead, but I am encouraged by what I have heard in these last few days. This is not designed to color your testimony at all. Say what you will, but I have the gavel. Seriously, what we have seen is more affirmative statements recently in terms of recognizing what the value of transportation investment might be.

Commissioner Downs.

## NEW JERSEY DEPARTMENT OF TRANSPORTATION

## STATEMENT OF THOMAS M. DOWNS, COMMISSIONER

Mr. DOWNS. Senator, it is a pleasure to be before you here today on a matter of such vital interest. Reinvesting in America's infrastructure has been documented as a national need by both the U.S. Department of Transportation and the U.S. General Accounting Office for the past several years, and has demonstrated the drag that this lack of investment has had on the national economy.

And we thought we had a solution when the ISTEA legislation was passed and the President had promised a new era in investment in infrastructure, but most of us in this business were somewhat chagrined by the former President's budget request for transportation for the last fiscal year. When, in reality, the appropriations levels for most of the programs were held constant, there was, in effect, no increase in the overall magnitude of the Federal investment in national capital plant.

We share, in New Jersey, both your hope and the new President's hope of rebuilding the Nation's infrastructure and putting people back to work. We have a list of projects that I would like to briefly summarize for you, and if you would bear with me there is a purpose for it other than just touting them off.

We have over \$200 million in highway and transit work on the shelf right now that can be obligated, completely obligated, by the end of this Federal fiscal year, that is October 1. This work represents over 6,000 construction industry jobs and a list of those projects, I hope, will bear out several points.

Resurfacing work: We have 40 million dollars' worth of resurfacing work on both the primary system and the interstate system that can be done now.

Bridge deck repair: We have 20 million dollars' worth of work on resurfacing bridge decks that can be done now, and that obviously protects the bridge decks themselves with a longer period of time.

Route 10 improvements: As you know, that is in a corridor that is very highly impacted by growth and will allow both a reliever for Interstate 80 and will make IVHS management possible along that portion of the corridor for \$7 million.

Metropark and Trenton transit parking garages, an incredibly important part of making the rail system work, for \$42 million.

Americans With Disability Act: High-level platforms on New Jersey Transit rail to meet the Disability Act requirements for accessibility, \$18 million.

Rail Equipment: Remanufactured diesel locomotives, \$13 million.

The Metropolitan Area Guidance Information Center, phase 1, for Routes 80, 46, 4, 3, and 280, which will allow us, as you have been pushing us, to manage traffic better within the State, \$18 million.

Route 3, Berry's Creek Bridge, rehabilitation and the roadway: This major artery in the Meadowlands complex will both improve the flow and congestion in that area, but also provide other job opportunities in the region.

Interstate Route 287, a project that would add a lane from Route 22 to 78. It is impossible to imagine that somehow we designed an interstate system where all of the traffic in that region goes to one



lane, which it does, and impacts both air congestion and goods movement severely, and that is \$43 million.

The Hunter rail connection, which will improve service on the Raritan Valley Line, for \$22 million.

Bridge painting, \$15 million.

All of those are obligable this year. They are designed, they have got permits, they are ready to go. That is \$200 million. The reason that I am mentioning those is that there is a lot of talk about additional investments are pork and pork goes by various definitions.

Every one of these projects in the State of New Jersey that is ready to go helps goods movement or it helps the movement of people, it helps attain air quality standards for the State, and it preserves the existing capital plant within the State of New Jersey. In other words, these are truly long-term investments in the economic health and vitality of the State, and they are ready to go.

And we have a construction industry within the State of New Jersey that has been severely impacted. In 1988, total construction, public and private, in the State of New Jersey was \$13 billion. In 1992 total construction, public and private, was \$6 billion. As much as we have ramped up public expenditure within the State for capital investment, we cannot offset the terrible losses that we have had in construction.

It has led the recession. Construction employment in New Jersey continues that downward spiral. Since 1988 New Jersey has lost 71,900 construction jobs. In the last calendar year alone, New Jersey's construction employment declined by 14 percent. This has had a terrible ripple effect throughout the entire State economy and has been the reason for the Governor's focus on New Jersey works and capital investment over the last 2 years.

New Jersey and other States continue to have unacceptably high levels of unemployment and forecasts for a very sluggish growth, as you have said. These investments, and I stress investments, will help stimulate New Jersey's economy in both the short and the long term. This is a good time to invest, both because these projects are good projects, but also because we are still getting a good buy. These projects are still coming in, almost every single one of them, underneath engineer's estimates. So the marketplace is still right for making timely, strategic, and prudent fiscal investments.

Thank you, Senator. I would be glad to answer any questions you may have.

#### PREPARED STATEMENT

Senator LAUTENBERG. Thank you very much, Commissioner Downs. Your full statement will be made part of the record.  
[The statement follows:]

#### STATEMENT OF THOMAS M. DOWNS

Senator Lautenberg and members of the Subcommittee on Transportation Appropriations, thank you for this opportunity to provide testimony to you.

Reinvesting in America's transportation system is important to both the nation's economic competitiveness and its viability. The USDOT and the USGAO, and all the states have reported that the nation's transportation infrastructure is in serious need of repair and rehabilitation.

We thought ISTEA would greatly assist us in beginning to address the disrepair of our nation's infrastructure. But in little over a month after signing ISTEA, Presi-

dent George Bush left our expectations unfulfilled by presenting a fiscal year 1993 budget that drastically cut transportation funding. Your Committee strove to right the wrong of President Bush's actions.

We in New Jersey share President Clinton's hope of rebuilding the nation's infrastructure, and putting people back to work.

Let me briefly outline what a stimulus additional federal funds could mean to New Jersey.

—New Jersey has over \$200 million in highway and transit work that is on the shelf and can be obligated by the end of this federal fiscal year.

—The work represents over 6,000 jobs.

—A list of these projects with a brief explanation of their economic value follows.

1. *Resurfacing, \$40 million.*—This project would allow the State to improve 65 miles of State highways and interstates through the application of a new surface course. Periodic resurfacing extends highway life and reduces accident rates.

2. *Bridge Deck Repair, \$20 million.*—This is the next phase of a statewide program to make immediate improvements in bridge deck conditions and applying latex modified concrete overlays, as a bridge deck protective measure. The result is longer lasting bridge decks and lower reconstruction costs over time.

3. *Route 10, \$7 million.*—This is a corridor of major new development in New Jersey. This project is the beginning of a series that will relieve acute congestion and open up a parallel route along I-80 to make IVHS management possible.

4. *Metropark & Trenton Parking Garages, \$42 million.*—Development in central New Jersey has put acute pressure on the Northeast Corridor. Parking at train stations sometimes has a 2 year waiting list. These two projects will relieve that shortage and leverage other development in the area.

5. *ADA High Level Platforms, \$18 million.*—The American Disability Act (ADA) of 1990 requires transportation providers to make their systems and facilities accessible. New Jersey's transit system needs to construct high level platforms for some of its lines and to make station improvements for disabled accessibility. These platform improvements will also reduce station dwell time, improve safety and add to the overall efficiency of the transit system.

6. *Rail Equipment, \$13 million.*—This would provide for the acquisition of eight remanufactured diesel locomotives to replace the remaining U34CH diesel locomotives. The results will be more reliable service, cleaner air, more energy efficient locomotives and operating cost savings.

7. *Metropolitan Area Guidance Information Center Phase I, Routes 80, 46, 4, 3 and 280, \$18 million.*—Located on one of the most congested corridors in the State, this project will begin to allow the State to manage traffic using a system of surveillance and traffic control measures.

8. *Route 3, Berry's Creek Bridge, Rehabilitation and Roadway, \$47 million.*—This project provides a new superstructure for the Berry's Creek Bridge; and the widening and the addition of lanes from Route 3 to Route 17. This area is a major arterial to New Jersey businesses in the Meadowlands Complex and for commuters to New York. The rehabilitation will improve safety and the efficiency of the route and regional system by relieving what has become an acute bottleneck.

9. *Interstate Route 287, \$43 million.*—This project would add an additional lane from Route 22 to Interstate Route 78 in each direction. The project would remedy a quirk in the road that requires through traffic to merge into one lane causing a bottleneck on the most congested corridor in the State. Both efficiency and safety are enhanced by this investment.

10. *The Hunter Connection, \$22 million.*—The efficiency of the rail line into Newark Penn Station and New York Penn Station is seriously diminished by the connection between the Raritan Line and the Northeast Corridor. The long term result is that more train service can be provided on the Raritan Valley Line and customer service will be greatly improved, making transit much more attractive in the region.

11. *Bridge Painting, \$15 million.*—This is a continuation of a statewide bridge effort to paint the steel of various bridges as an anti-corrosion measure. The long term benefits are that bridges reach their designed life and lower maintenance costs.

That summarizes the impact additional federal funds could have on New Jersey.

#### NEW JERSEY CONSTRUCTION UNEMPLOYMENT

The construction industry in New Jersey experienced a dramatic decline in construction contracts from \$13 billion in 1988 to less than \$6 billion in 1992. Even though there was a rebound in public works projects, this did not offset the decline in private sector construction contracts. We need to stimulate the industry to promote economic growth.

Construction employment in New Jersey continues on a downward spiral. Since 1988 New Jersey has lost 71,900 construction jobs. In the last calendar year alone, New Jersey's construction employment declined by 14 percent.

This has a significant adverse effect on private sector employment and growth and compromises New Jersey's competitiveness.

However, New Jersey and other states continue to have unacceptably high levels of unemployment and the forecast of very sluggish economic growth. These investments will help stimulate New Jersey's economy in both the short term and the long term. This is also a good time to invest because projects are still coming in below the engineer's estimate in New Jersey.

Thank you.

## BUILDING AND CONSTRUCTION TRADES DEPARTMENT, AFL-CIO

### STATEMENT OF ROBERT A. GEORGINE, PRESIDENT

Senator LAUTENBERG. Now we will call on Bob Georgine and invite you to give your testimony. We welcome you here. You and I have talked many times about investments in transportation infrastructure. We look forward to your comments.

Mr. GEORGINE. Thank you very much, Mr. Chairman. First, let me thank you for the opportunity to appear before your committee. And, of course, I respectfully request that my full testimony will be made a part of the record.

Senator LAUTENBERG. Without objection.

Mr. GEORGINE. Mr. Chairman, as you know, I am president of the Building and Construction Trades Department and I represent 15 unions and approximately 4 million members. I have testified on every piece of legislation, every authorization, every appropriation on public works, infrastructure, et cetera, for the last 22 years.

So I think you know, and I will say it, that I support what you are proposing. And as a matter of fact, I could stop here and just rest on your opening statement, or rest on what Tom has said here just a few minutes ago.

But obviously Senator Arlen Specter, who is a Republican, agrees with what you are proposing, and it obviously has bipartisan support. But the time is overdue. I mean, every President in the last 20 years has campaigned on the issue of rebuilding the infrastructure in this country.

Our magnificent system of bridges, highways, dams, airports is a celebration of American craftsmen and ingenuity, yet their decay is a symbol of Government neglect and shortsightedness. Despite all of the progress that has been made over the past two centuries in building an infrastructure that has been the envy of the world, our infrastructure is now crumbling and dying and just falling apart all around us.

You may recall that a large water main which supplies water to the Anacostia section of Washington, DC, burst in January 1992 flooding a large portion of the business district and causing many office buildings to shut down. I mean that is only an example of the kinds of things that are happening in this country. Bridges are falling down, people are getting killed.

And I could go over this litany of all the work that is ready to go, much as Tom has just gone over. That exists in every city in this country and every State of this country. The Governors have a list of things that are ready to go.

We have, for the last 10 or 12 years, listened to so much rhetoric about how we need the infrastructure repaired, about how we need



to get this economy going, about how we can do these things, take care of our unemployment, increase our productivity, and at least keep pace with the other countries in the world, but we have not done it. We are being passed by Japan, Germany, France, Italy, Great Britain, Canada. All of them have invested more of their fiscal resources on their infrastructure, and as a consequence have shown a greater productivity growth.

We are not doing that in the United States, but yet we talk about it. We talk about the fact that we cannot pay for it. We have already heard that there is \$10 billion sitting idle in the highway trust fund. One-half of the 5-percent-a-gallon gas tax passed in 1990 has been diverted to reduce the Federal deficit, and this just continues to go on and on and on.

And, you know, I have outlined all of these things in my testimony and it will be said over and over and over again today; you have said it, the Senator has said it, Tom has said it. The fact of the matter is that we have waited too long. The time is not now. The time was yesterday, 1 year ago, 5 years ago, 10 years ago, and we have not done a thing, at least not a thing that makes a big difference.

The fact of the matter is that there is tremendous unemployment in this country. In the construction industry alone we have—if you want to use real numbers now, I am talking about real people, there is not a city in this country that we do not have at least 25 percent unemployment. There are some where we have—some small cities we have 100 percent unemployment.

I mean we have just waited so long to get this kind of injection into the economy that there are people who wonder if it is ever going to happen. So let me just say in closing that we support fully everything that you have in the legislation. We say that to just take what the legislation provides in 1992 and 1993 is not enough.

I think we have to jump start the economy. I think we have to take some of the appropriation off the back end, or the authorization off the back end and appropriate it now. I think we have to get the jobs done that Tom has illustrated in his State, and all the other States in this country, and we just cannot wait any longer.

And I am willing to answer any questions.

#### PREPARED STATEMENT

Senator LAUTENBERG. Thank you very much, Mr. Georgine. Your full statement will be made part of the record.

[The statement follows:]

#### STATEMENT OF ROBERT A. GEORGINE

Mr. Chairman: My name is Robert Georgine, and I am the president of the Building and Construction Trades Department, AFL-CIO, which consists of 15 national and international labor unions that represent over four million workers in the building and construction industry. I am appearing today on behalf of the Building and Construction Trades Department and its fifteen national and international affiliates.

Upon the foundation of America's immense infrastructure rests the world's most advanced and sophisticated economy. The quality of life enjoyed by the great majority of Americans today is due in large part to the visionary leadership provided over the course of more than 200 years in building, expanding and maintaining a sound and extensive infrastructure. It has profoundly changed the way Americans live and work.

Our magnificent system of bridges, highways, dams and airports are a celebration of American craftsmanship and ingenuity, yet their decay is a symbol of government neglect and short-sightedness.

Despite all of the progress that has been made over the past two centuries in building an infrastructure that has been the envy of the world, our infrastructure is now crumbling. For example, water storage and distribution systems are deteriorating in some older cities. In a certain two-year period, 34 cities suffered an average of 229 water main breaks per 2,000 miles of main. In addition, leaking pipes cause some major cities to lose as much as 30 percent of their daily water supply. You may recall that a large water main which supplies water to the Anacostia section of Washington, D.C. burst in January of 1992, flooding a large portion of the business district and causing many office buildings to shut down. That water main was reported to be 80 years old. Moreover, despite a \$44 billion Federal investment in sewage treatment since 1972, it will take \$83.5 billion to meet waste water treatment requirements of the Clean Water Act by 2005, according to the Environmental Protection Agency.

The modern land transportation system was initiated pursuant to the Federal Aid Road Act of 1916. This was the first legislation that authorized substantial Federal expenditures for highway transportation. The depth of America's commitment to a national interconnected highway system came with passage of the Federal-Aid Highway Act of 1956, which authorized construction of the interstate system and established the highway trust fund. It was the largest highway construction program and, in fact, the largest public works program ever undertaken by the Federal Government.

Creation of the highway trust fund allowed roads to be financed on a pay-as-you-go basis from a tax on motor fuels, tires, trucks, truck parts, lubricating oil, and the use of heavy vehicles. The gas tax was increased in the 1982 Surface Transportation Act from 4-cents to 9-cents per gallon. The act also provided that 1-cent of the 5-cent gas tax increase be transferred to the mass transit account of the highway trust fund to finance non-highway uses.

In 1987, the Surface Transportation and Uniform Relocation Assistance Act authorized Federal-aid highway programs through fiscal year 1991, and extended the highway trust fund through 1993.

Nevertheless, despite our long history of accomplishments in road-building, more than 60 percent of the miles of paved highways in the United States need some form of surface rehabilitation. According to the Department of Transportation, some 265,000 miles of highways were in poor condition in 1989, and about half of the Nation's total highway miles were at or near the point at which vehicle operations would be impaired by deteriorating conditions. Thirty-five percent of the interstate system will have outlived its useful life by 1995, and the cost of maintaining the system could exceed the initial \$120.5 billion cost of construction.

Moreover, 39 percent of the Nation's bridges are currently rated deficient, including one out of every four of the 270,000 Federal-aid interstate, primary, secondary and urban bridges that carry 85 percent of the Nation's traffic.

Congestion is a growing problem. Almost 70 percent of daily peak-hour travel on the urban interstate system in 1989 occurred under congested conditions. By the year 2005, traffic delays caused by inadequate roads will cost the Nation \$50 billion a year in lost wages and wasted gasoline.

Similarly, airports are crowded, airways congested, and the air traffic control system needs substantial upgrading to maintain safety. The Federal Aviation Administration estimates that the number of "seriously congested" airports will increase to 58 by the year 2000, a dramatic increase from 16 such airports in 1986, and the congestion will affect 74 percent of the passengers, compared with 39 percent in 1986.

These grim statistics reflect our failure as a Nation to make the needed investment in our basic public facilities. Total public spending on infrastructure dropped from 3.6 percent of the Gross National Product in 1960, to 2.6 percent in 1985. The relative share of public works spending at all levels of government declined from nearly 20 percent of total expenditures in 1950, to less than 7 percent in 1984. The Federal share of infrastructure spending has declined from 41 percent in 1981, to 34.5 percent in 1986.

Clearly, the United States has failed to make the kind of investment in our basic public facilities that would enable it to maintain the level of productivity which we used to enjoy. As a result, the U.S. productivity rate has fallen from 1.8 percent annually in the 1960's to 0.7 percent during the early 1980's. This decline in productivity makes it even more difficult for the United States to compete with other countries today.

Our Nation's reduced capital investment over the past 20 years has permitted foreign competitors which have invested in their own futures to far surpass our productivity growth. Japan, Germany, France, Italy, Great Britain and Canada have all invested more of their fiscal resources on their infrastructure and, as a consequence, have shown greater productivity growth. By the same token, the reduced productivity growth in the United States over the past two decades coincides directly with our reduced infrastructure capital investment and decline in real wages.

Numerous studies have substantiated the relationship between productivity and competitiveness. It has been projected by well-respected economists that at current employment rates, 20 years of an added \$25 billion in infrastructure investment will result in \$3,200 in increased productivity per year for each American worker in 20 years, or \$378 billion annually. In addition, we would have a 23 percent increase in the productivity growth rate from the projected annual rate of 2.2 percent to 2.75 percent. Within 20 years, the added investment would increase corporate profit margins up to 10 percent and create a \$35 billion increase in private investment above current projections.

Nevertheless, some might say that we can not afford to make this additional investment in our infrastructure. I say that we can not afford not to make such an investment. But how can we pay for this investment? There are a number of sources. I understand that we already have over \$10 billion sitting idle in the highway trust fund, and half of the 5-cent per gallon gas tax passed in 1990 has been diverted to reduce the federal deficit. By using this money to shield the deficit, we are neglecting the need to invest in rebuilding our national infrastructure and are short-changing the one tried and true path to economic prosperity.

The highway trust fund, with its mass transit account, contributes not one dime to the deficit, and it provides a stable and predictable source of funding on an equitable basis. The fund has had an impressive track record since it was created in 1956. Trust fund income has generally increased over the years, along with earned interest, and a large balance exists mostly because of funds that are not obligated for highway and transit projects. Congressionally-established ceilings constrain the Federal funds available to States to spend on highway projects. In fact, of the \$10 billion balance in the highway trust fund, obligation ceilings only accounted for approximately \$8 billion of that balance.

Furthermore, the funds that are restricted from obligation in one year carry over to the next year, when newly-imposed obligation ceilings further restrict states from spending these funds. Thus, the margin between funds which States may obligate as defined by the ceilings and the funds which could be available for state spending is creating an even larger surplus. And while the highway account of the trust fund shows no unobligated balance, due to the existence of firm commitments of over \$30 billion for long-term highway projects, this ignores the fact that projected revenue from the user taxes will likely be more than enough to meet those commitments.

The Federal Highway Administration admits that a balance of some \$1-3 billion is sufficient in the fund to cover any unexpected revenue drop; therefore, it appears that the difference between the current \$10 billion balance and a \$1-3 billion reserve balance could be expended for a one-time increase in authorizations for Federal highway programs.

There have been efforts in the past to enact legislation that would remove both the highway and aviation trust funds from the unified Federal budget because of their ever-mounting balances. Taking the highway and aviation trust funds off budget would remove the incentive for establishing obligation ceilings below what the user fees will support because receipts and outlays of the trust funds would no longer be used for Federal deficit calculation.

It is outrageous to collect tax dollars under the pretense of paying for roads, bridges, and mass transit, and then not use the money for those purposes. The Federal Government is breaking faith with the users of our transportation system in the most grievous manner, and it appears that taking the highway and aviation trust funds out of the unified budget is the most effective, if not the only means of ending this long-standing and deplorable practice.

Above all, what should be fully understood is that investment in the infrastructure does not compete with other financial demands. It is an investment in the future. According to House Report No. 102-171 which accompanied the Intermodal Surface Transportation Infrastructure Act of 1991, for every \$1 we invest in the infrastructure, we get a \$10 payback.

Furthermore, unemployment in the building and construction industry has become acute. Even though it is estimated that the Intermodal Surface Transportation Infrastructure Act of 1991 will create approximately 1.3 to 1.5 million on-site construction jobs, and approximately 4 million to 4.5 million total jobs, much of this economic stimulus will not occur until later because appropriations under the Inter-



modal Surface Transportation Infrastructure Act of 1991 are substantially lower in fiscal years 1992 and 1993 than in the later years.

What we need is an economic stimulus right now. A sort of "jump-start", of the economy, a program modeled after the highly successful Local Public Works Program implemented by the Economic Development Administration of the U.S. Department of Commerce in October, 1976. According to the "Local Public Works Program Final Report" issued by the Economic Development Administration in December, 1980, the 1976 Local Public Works Program accomplished all three of its interrelated purposes of stimulating the national economy and distressed local economies through the infusion of Federal public works funds; generating employment opportunities, particularly in construction trades and related industries and services; and constructing or rehabilitating useful public facilities.

The EDA report concluded that the Local Public Works Program stimulated \$1.02 in public works construction that would not have taken place for every \$1.00 in Federal funds spent during the life of the program. The report also found that nearly one-half of the total employment attributable solely to the Local Public Works Program was in on-site construction jobs or supply and service firms. The remaining employment was in private firms that produced increased goods and services as a result of additional consumption by the Local Public Works Program workers, contractors and suppliers.

Finally, the report found that unlike most other countercyclical programs, the Local Public Works Program produced long-lasting physical results in the form of improved public infrastructure. One-half of the projects funded under the program involved construction or rehabilitation of facilities that promote long-term economic development, such as water and sewer systems, access roads, port facilities, and shell industrial buildings. As a result, these projects not only provided services to the residents of the local communities and short-term employment for building and construction workers and related services; they also stimulated private investment in industrial and commercial development. These in turn generated long-term private sector employment opportunities.

In addition to long-term economic development, the Local Public Works Program financed a wide range of community development projects including schools, public housing and health facilities. The program also funded construction and renovation of public service facilities such as police and fire stations, cultural and recreational projects such as parks, theaters and gymnasiums. All of these projects contributed to strengthening the Nation's infrastructure. The same kind of investment is once again needed.

In summary, Mr. Chairman, I can not think of a better investment for the short term and the long term than in our infrastructure.

Thank you.

## THE ASSOCIATED GENERAL CONTRACTORS OF AMERICA

### STATEMENT OF PETER K.W. WERT, CHAIRMAN, HIGHWAY DIVISION

Senator LAUTENBERG. Mr. Wert, we welcome you here and ask you to give your testimony at this time.

Mr. WERT. Thank you, Mr. Chairman. It is a pleasure to be here today to represent the Associated General Contractors of America's views on the need to invest in the Nation's transportation system. AGC shares in President Clinton's commitment to move the economy forward and to rebuild our public infrastructure. AGC is eager to work with the Congress and the new administration as it develops policies and programs to enhance economic growth, increase infrastructure investment, create jobs, and make America more competitive in a global economy.

Hundreds of thousands of men and women can be put to work, and the economy strengthened now, if Congress will do the following:

The Intermodal Surface Transportation Efficiency Act of 1991 [ISTEA] should be fully funded. In the 2 years since its enactment, the States have received \$4.4 billion less in highway funds than the act authorized.

The 2½ cents of the Federal gas tax now being used for deficit reduction should be dedicated to the highway trust fund for needed highway and bridge improvements.

Quarterly and annual highway program obligation ceilings should be lifted, which will allow States to maximize their ability to meet critical highway and bridge needs.

Mr. Chairman, AGC commends you for your leadership in proposing legislation to provide additional funding for the Nation's transportation infrastructure.

The construction industry plays a vital role in our Nation's economy. Examples of construction's contributions to the economy include:

Construction activity has a direct impact on over 40 related industries, as the construction industry purchases goods and services from a wide range of manufacturers and businesses. Each \$1 spent on new construction in the United States generates a total of about \$3.60 in economic activity across all industries and services. Each \$1 billion spent on new construction in the United States creates nearly 47,000 jobs in construction, supplier, and service industries.

Simply stated, a healthy economy depends on a healthy construction industry. But as you have already heard, America's construction industry is not healthy, despite some recent indicators suggesting that some segments of the economy may be improving. Few, if any, industries have been and continue to be as hard hit by the recession as the construction industry.

For example, the industry has lost 781,000 jobs since February 1990. Construction unemployment is twice the national average. Employment in the construction industry stands at pre-1985 levels. One of every 10 unemployed persons in the United States is a laid-off construction worker.

As the Nation looks at setting new priorities and investing in the future, adequate investment in public infrastructure is vital to provide the underpinning that is essential for a productive and competitive U.S. economy. Unfortunately, investment in physical infrastructure as a percentage of gross national product has declined over the past 20 years in the United States.

Today, as a nation, we invest a much smaller percentage of our income in infrastructure than all of our major global competitors. While it is true and appreciated that Congress has increased highway user fees by 5 cents in 1982 and by 5 cents in 1990, 2½ cents of which is earmarked for deficit reduction, the failure to adequately upgrade, repair, and expand the Nation's infrastructure over the past 20 years was a major policy mistake and a prime contributing factor to the Nation's current economic woes.

The construction industry supports and appreciates the subcommittee's commitment to create jobs and stimulate the economy. As you have recognized in your proposed bill, billions of job-creating dollars can be infused into the economy now, without authorizing new spending programs or increasing taxes, through the Federal-Aid Highway Program and the Airport Improvement Program already in place, both time-tested vehicles which have put millions of Americans to work creating and preserving the transportation backbone of our Nation's economy.



Enactment of the Intermodal Surface Transportation Efficiency Act provided the framework for the Nation to begin to address the long-deferred investment in the Nation's highways and bridges. However, the promises of ISTEA will go unfulfilled unless Congress takes a leadership role in providing the necessary funds to fully implement the act. Without increased funding, the well-documented backlog of highway and bridge needs will continue to mount.

In its biennial report to Congress issued last week, the Federal Highway Administration reported that the average annual capital cost to all levels of government and the private sector to improve the condition of the Nation's highways and bridges is \$62.6 billion, which is more than twice the current annual investment of \$26.4 billion.

The States and the construction industry stand ready to take on the challenge to rebuild the Nation's highway system. The American Association of State Highway and Transportation Officials [AASHTO] indicates that in fiscal year 1993, the States have the capacity, collectively, to utilize at least \$8.5 billion in Federal highway funds beyond the \$18 billion already provided by Congress.

With construction unemployment twice the national average, more than enough equipment and manpower currently exists within the construction industry to immediately take on this increased workload without any adverse economic consequences. AGC and the entire business community have a tremendous stake in the success of legislation to stimulate the economy and to enhance economic growth. So, too, do the millions of American workers they gainfully employ.

We commend you, Mr. Chairman, for your leadership in proposing legislation to put American men and women back to work in the construction of the Nation's transportation system. I would be happy to answer questions.

#### PREPARED STATEMENT

Senator LAUTENBERG. Thank you. Your full statement will be made part of the record.

[The statement follows:]

#### STATEMENT OF PETER K.W. WERT

Good morning Mr. Chairman. My name is Pete Wert. I am a highway contractor from Oklahoma City, Oklahoma, and Chairman of the Highway Division of the Associated General Contractors of America (AGC).

It is a pleasure to be here today to present AGC's views on the need to invest in the nation's transportation system.

AGC shares in President Clinton's commitment to move the economy forward and to rebuild our public infrastructure. AGC is eager to work with the Congress and the new Administration as it develops policies and programs to enhance economic growth, increase infrastructure investment, create jobs and make America more competitive in a global economy.

Hundreds of thousands of men and women can be put to work, and the economy strengthened—now—if Congress will do the following:

- The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) should be fully funded. In the two years since its enactment, the states have received \$4.4 billion less in highway funds than the Act authorized.
- The 2.5 cents of the federal gas tax, now being used for deficit reduction, should be dedicated to the Highway Trust Fund for needed highway and bridge improvements.

—Quarterly and annual highway program obligation controls should be lifted which will allow states to maximize their ability to meet critical highway and bridge needs.

Mr. Chairman, AGC commends you for your leadership in proposing legislation this week to provide additional funding for the nation's transportation infrastructure.

#### CONSTRUCTION'S ROLE IN THE NATION'S ECONOMY

The construction industry plays a vital role in our nation's economy. Examples of construction's contributions to the economy include:

- Construction activity has a direct impact on over forty related industries as the construction industry purchases goods and services from a wide range of manufacturers and businesses.
- Each \$1 spent on new construction in the United States generates a total of \$3.61 in economic activity across all industries and services.
- Each \$1 billion spent on new construction in the United States creates 46,800 jobs in construction, supplier and service industries.

Simply stated, a healthy economy depends on a healthy construction industry. But America's construction industry is not healthy—despite some recent indicators suggesting that some segments of the economy may be improving. Few, if any industries have been, and continue to be as hard hit by the recession as the construction industry:

- The construction industry has lost 781,000 jobs since February 1990.
- Construction unemployment is twice the national average.
- Employment in the construction industry stands at pre-1985 levels.
- One of every ten unemployed persons in the United States is a laid-off construction worker.

As the nation looks at setting new priorities and investing in the future, adequate investment in public infrastructure is vital to provide the underpinning that is essential for a productive and competitive U.S. economy. Unfortunately, investment in physical infrastructure, as a percentage of GNP, has declined over the past twenty years in the United States. Today, as a nation, we invest a much smaller percentage of our income in infrastructure than all of our major global competitors. While it is true and appreciated that Congress increased highway user fees by five cents in 1982 and by five cents in 1990 (2.5 cents of which is earmarked for deficit reduction), the failure to adequately upgrade, repair and expand the nation's infrastructure over the past twenty years was a major policy mistake and a prime contributing factor to the nation's current economic woes.

#### THE FEDERAL-AID HIGHWAY PROGRAM

The construction industry supports and appreciates the Subcommittee's commitment to create jobs and stimulate the economy. As you have recognized in your bill, billions of job-creating dollars can be infused into the economy now—without authorizing new spending programs or increasing taxes—through the Federal-aid Highway Program, an already-in-place and time-tested program which has put millions of Americans to work creating and preserving the transportation backbone of the nation's economy.

Enactment of the Intermodal Surface Transportation Efficiency Act provided the framework for the nation to begin to address the long-deferred investment in the nation's highways and bridges. However, the promises of ISTEA will go unfulfilled unless Congress takes a leadership role in providing the necessary funds to fully fund the Act.

Without increased funding, the well documented backlog of highway and bridge needs will continue to mount. In its biennial report to Congress issued last week, the Federal Highway Administration reported that the average annual capital cost to all levels of government and the private sector to improve the condition of the nation's highways and bridges is \$62.6 billion—more than twice the current annual investment of \$26.4 billion.

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With the construction unemployment twice the national average, more than enough idle equipment and available manpower currently exists within the construction industry to immediately take on this increased workload without any adverse economic consequences.

AGC, and the entire business community, have a tremendous stake in the success of legislation to stimulate the economy and enhance economic growth. So, too, do the millions of American workers they gainfully employ.

AGC commends you, Mr. Chairman, for your leadership in introducing legislation to put Americans back to work on work that needs being done now.

#### SUPPORT OF INFRASTRUCTURE INVESTMENT

Senator LAUTENBERG. Thank you. What a remarkable accomplishment, this panel never hit the red light. That is three out of three. Three people, and you were going at a good rate of speed too, did not break the law once.

Thank you very much. As you know, there is a very supportive attitude in the Clinton administration concerning infrastructure investment. However, some questions have been raised dealing with the ability to use the funds on a current and effective basis, and examples have been cited about the slow spend-outs on infrastructure programs. Highways often take a fairly long time before permits are issued, property acquired, et cetera. Similarly, transit and the airports as well.

And I was persuaded by the things we researched that there are people available to go to work, Mr. Georgine, that there are contractors ready and able to go—you mentioned equipment and personnel. And, Commissioner Downs, we have seen New Jersey step up and meet its share of the obligation by the Governor's announcement to accelerate spending with trust funds that have already been developed and designated, but to get it out there and to get this program moving.

And I am hopeful that as we review the testimony here from interested, knowledgeable parties, that we are going to be able to completely make the case for not only those who make the decision within the executive branch, but also for colleagues of mine who are also concerned, as I am, about the deficit.

There are a couple of ways to control the deficit. You know, I came from the corporate world, and that I would have done as CEO of a fairly significant sized company if business turned down are: (a) I would not be likely to raise prices, and (b) I might step up some business-getting measures—sales, marketing, maybe new product design and that kind of thing.

And that is consistent with what I see as one of the ways to deal with our very serious deficit problem, and that is to invest our way out as opposed to simply shrinking down everything and hoping that there are some natural forces coming along that are going to lift the economy out of the doldrums. But anyway, without further presenting my own bias—obviously, I would not be introducing a bill like this if I did not think that it had merit and plausibility in terms of its delivery.

For Commissioner Downs, you listed a number of projects, by coincidence some of them even touching my neighborhood. And we would not do all that just to get me to the airport on time. But you enumerated many throughout the State. Are these ready-to-go projects? You talked about 6,000 jobs. Are we talking about programs that are going to run 1993, 1994, et cetera, or are we going to be able to get started quickly and get those people to work promptly? What is the prognosis for that?



Mr. DOWNS. Every one of those projects is obligable this Federal fiscal year, between now and October 1. They are ready to go. They are predesigned. They are permitted or permitable because we picked a number of areas that are not environmentally contentious like redecking, resurfacing, bridge painting, and a mix of selected investments in high occupancy vehicle areas, IVHS, where we have avoided controversy. And these projects are doable now. We have proven last Federal fiscal year that we could obligate everything we had given to us to the regular apportionment, and then got some bonus money back as a result of obligating it.

Our commitment has been consistently that the need is so great we have to deliver the product. It is a public responsibility. I would not be listing a single one of those projects if I did not think that every one of them was deliverable now, and not in a year or 2 or 3. There are no complex, major construction projects that require 5 or 6 years' worth of studies and analysis.

Senator LAUTENBERG. So, you would not have a problem then with the requirement that I have included in my proposal that the funds be obligated by the end of the fiscal year, and that the programs get started in that timeframe?

Mr. DOWNS. We can do it.

Senator LAUTENBERG. Are you active in the Association of Transportation Commissioners and other national organizations? Is New Jersey unique with its problems and ability to start these programs?

Mr. DOWNS. I would say we are pretty aggressive about having work on the shelf ready to go.

Senator LAUTENBERG. How about other States?

Mr. DOWNS. Other States vary from no capability, but they are very few, to a number of States, and they are usually States that have the kind of economic problems that we have had—a downturn in the construction industry because of the interest within the State about getting more work out.

The figure was mentioned about the AASHTO survey of States where the States responded that they had the capability of obligating an additional \$8 billion. And in my experience, that is a reasonable figure that is reasonably accurate and, I think, more than defensible.

I know the Federal Highway Administration is currently doing a resurvey of all of the States about their abilities to obligate this fiscal year. And I think you will find that the figures that you were talking about are more than sustainable.

Senator LAUTENBERG. There has been an estimate released that talks about highway deficiencies, bridge obsolescence. You mentioned that. Have you seen a percentage that sticks in your mind that speaks to the percentage of highways needing attention and the percentage of bridges needing attention?

Mr. DOWNS. I just know my State. We have about 2,000 bridges within the State of which about 500 are in need of some serious work of one kind or another—roughly 25 percent of our bridges within the State.

Our mileage on the State road network, we should be reconstructing approximately 700 miles of road a year. Up until very recently, we were doing about 150 to 200 miles of road a year on re-

construction just of existing roadway. So, we were falling further and further behind. Our roads were aging, literally, every year.

I do not have the recent Federal Highway Administration statistics.

Senator LAUTENBERG. DOT estimates that 39 percent of the bridges are in serious need of rehabilitation, repair, attention. Sixty-five percent of the roads in the country need rehabilitation work of some sort or another. And that certainly makes the case for additional investment fairly apparent.

Mr. Georgine, in terms of the folks that you represent, you mentioned the unemployment figures in the construction industry. Are people ready to go to work? Is the skills base there that we need to get on with these tasks?

Mr. GEORGINE. As I said, in the construction industry we have tremendous unemployment. We have that unemployment as this economy has gone down on this terrific slide that it has in the last 10 to 12 years.

The fact of the matter is that our work force is in the major cities in this country. If you were to look at the jobs that the mayors have said are on the shelf, ready to go, that is where the bulk of the work has to be done.

In my own city, in Chicago, for instance, not too long ago water went through a retainer wall and crippled the underground nervous system of the city. There is a tremendous amount of work that has to be done to keep our cities at least in a condition where they can handle the people that now live there.

So, we have the men. They are out of work. They have the skills. They are qualified.

Senator LAUTENBERG. Ready to go?

Mr. GEORGINE. Ready to go. They are waiting to go. They want to go. Our people do not like to sit home. Our people do not like to collect unemployment compensation. They want to work. They are ready.

Senator LAUTENBERG. Is that a condition throughout the country with people who have skills who are unemployed, anxious, and ready to go to work?

Mr. GEORGINE. Unfortunately, that is the condition that exists in most of the country. In fact, really all of the country.

Senator LAUTENBERG. Is there a bright light at the end of the tunnel as far as your people are concerned?

Mr. GEORGINE. We do not see anything coming out. I do not see any light at the end of the tunnel unless you will be able to get through what you are trying to do, unless President Clinton keeps his campaign rhetoric going and makes it a reality. The Secretary of Labor was speaking today on a news program this morning. He said all the right things. We are hopeful that all of those things will take place. But if you look at our history, it has not taken place.

Senator LAUTENBERG. Do you see places around the country where, if we were able to make the appropriate investments, that we would be searching for people to go to work? Would we have to transport people from different regions of the country or is there just generally a ready reserve of skilled working people ready to go?

Mr. GEORGINE. There is not a location in this country that there is not a skilled work force that is, right now, out of work and ready to go to work. You would have to do a hell of a lot of work to put all of those people to work and be looking elsewhere for workers.

Senator LAUTENBERG. We are going to try. The estimates of the job creation from infrastructure investment vary somewhere between 30,000 to 50,000 or 60,000 persons per billion. Have you at the AFL-CIO looked at that and come up with your own estimate of what 1 billion dollars' worth of investment in the infrastructure might do by way of direct and indirect jobs?

Mr. GEORGINE. I have got that in my testimony. My mind is a blank.

Senator LAUTENBERG. Well, take a look because you did not have a chance to deliver the full testimony. It is very good. I read it.

[The information follows:]

[From AFL-CIO Reviews the Issues, Report 51, issued in May 1991, which was prepared by Anne Draper and Frank Parente of the Economic Research Department of AFL-CIO:]

We estimate that each billion dollars spent on construction contracts generates 15,000 to 22,000 jobs. The estimate varies by type of construction with highways being the most labor intensive and commercial office buildings the least. Roughly half the jobs are in construction and half in non-construction industries, such as manufacturing, mining, transportation, trade and services. (Depending on the type of project, the percentage of jobs in construction itself varies from 40 percent to 60 percent.)

These estimates are approximations because current detail is not available from recent survey work. Rather, they represent an updating of old survey work.

The last specific estimates were prepared by the Bureau of Labor Statistics and were presented for the year 1980—more than 10 years ago. These showed the number of jobs generated per billion dollars of construction contract expenditures for several different types of projects, both private and public.

Senator LAUTENBERG. Mr. Wert, I assume that I need not ask you whether your members are feeling that the recession is largely behind us and brighter days are ahead. Is that characterization appropriate, or are there still dark clouds hanging overhead?

Mr. WERT. There are still the dark clouds. Bob Georgine stated it eloquently. One of the things that I believe as a construction contractor, we are on a roller coaster headed down, and if we do not do something it will not be a matter necessarily and exclusively of increasing employment, it is to save jobs. If we do not turn the car around on the track, if we do not get that car slowed down heading downward, our unemployment will continue to escalate.

So, from my standpoint in my company, it is a matter that those who are gainfully employed today are in danger of not having jobs tomorrow. So, I think we have to stop that slide. And then, I agree with Mr. Georgine, the potential is there untapped, equipment is parked, folks in the industry who love this industry are ready to come back and go to work.

Senator LAUTENBERG. All the equipment that we need to start rolling is ready and available? What overhangs this series of questions, of course, is the notion that if we put the money in, it is going to be a long time before anything happens. And I want to be sure that there is a clear understanding of where we are.

We have talked to the New Jersey Transportation Commissioner and to Bob Georgine from the AFL-CIO's building and construction



trades department. Are there people in your industry, contractors and subcontractors, ready to roll if the funds are available?

Mr. WERT. Yes, sir; we are in the business of making things happen.

Senator LAUTENBERG. What are the secondary impacts of construction spending? Your members and your association must look fairly regularly at what ancillary results there are, additional jobs, et cetera. Do you have something that you can give us?

You did say in your testimony, I believe, that there is a \$3 to \$6 return for every dollar of investment. Do I quote you correctly?

Mr. WERT. Yes.

Senator LAUTENBERG. Where do you see these benefits occurring as we invest in the transportation infrastructure?

Mr. WERT. Well, I have read figures that run from the \$3 to \$6. And I am a construction person, not an economist, but I can tell you that as my company goes back to work on prime contracts, it generates goods and services demands from suppliers in my area. It puts steel people back to work. It generates business for those who supply us the day-to-day tools of doing construction. Subcontractors come back. They begin to again purchase.

One of the nice things I think is that once we begin to get the feeling that this is for real, that in addition to putting unused or parked equipment back to work, we begin to think about investing in new things. And so I believe that as an imponderable a thing that it might be, that optimism begins to generate that American spirit that says, we ought to go lay on the line and accept some risk because things are going to get better, and we will improve our technology, our productivity. And so it becomes a very exciting thing to witness as the dollar you spend moves down through our economy.

Senator LAUTENBERG. Do you have an estimate of what percentage of your production capacity is either at work now or idle now, whichever side of the coin you choose?

Mr. WERT. 50 percent is idle.

Senator LAUTENBERG. 50 percent is idle.

Mr. WERT. Yes, sir.

Senator LAUTENBERG. And, again, there is a state of readiness that says that, in a fairly quick burst, the equipment, the structure in the industry is there to put these funds to work, because we have people from State government saying, listen, here is an example. New Jersey is not the only one, we know that, where there are programs begging to be started.

And there are, kind of, three elements to this, and one is the manpower, the contractors and managers of the programs, and the State governments that have to make decisions about where to employ those. So, your team is ready to go to work immediately?

Mr. WERT. Yes, sir.

Senator LAUTENBERG. We are joined here by my colleague, who used to be introduced as the next President of the United States, Senator Tom Harkin from Iowa. Dare I introduce you that way?

Senator HARKIN. I am glad you remembered. [Laughter.]

Senator LAUTENBERG. Senator Harkin.

## STATEMENT OF SENATOR HARKIN

Senator HARKIN. Thank you, Mr. Chairman.

First of all, Mr. Chairman, let me thank you and congratulate you for having this very timely and very important hearing today. I know all the experts say the recession is over. By definition, it ended nearly 20 months ago. The problem is, there are over 9 million Americans who have not quite heard the textbook definition of a recession, and they are still out of work.

You mentioned, I know, in your opening statement, Mr. Chairman, this week alone United Technologies announced it will be laying off 10,000 workers, Boeing will be laying off 10,000, Sears has told us it is sending 50,000 people to the unemployment line.

In the last 2 months, IBM has announced it will lay off 25,000 workers, GM said it was letting 74,000 go. The number of long-term unemployed workers is double the number that we had in 1990—not 1980, 1990—so action is needed.

The Wall Street Journal's semiannual survey of 44 economists released this month projected a decline of less than 1/2 percent in the unemployment figures this year and a mediocre 3 percent growth in the economy at best.

So the bottom line is this: We have got to put people back to work. All the people who do not read Webster's Dictionary cannot afford to wait around for this so-called recovery to start producing jobs.

Well, I have heard there are a lot of so-called deficit hawks hanging around the city and the administration these days. Well, count me as an investment hawk. I do not think we ought to put ourselves in debtor's prison, but we ought to recognize that only by investing in the future will we grow out of this deficit, and a stimulus program focused on infrastructure spending will put people back to work. As you said, their paychecks will boost the entire economy.

If I might, I will refer back to my Presidential campaign. I had a platform that I came up with a little over 1½ years ago, and it was called A Blueprint to Rebuild America, and I fashioned it after a study that had been done by the Bank for International Settlements in Geneva, Switzerland.

This bank had done a study of the different economies in the industrialized, democratic world, and I would commend that study to any of you. If any of you need to find out how to get it, I have got a few copies left over.

The Bank for International Settlements had shown that in those sectors of the world in which the governments had invested in infrastructure, that they had higher rates of growth in the private sector, that their private sector had become more efficient and more productive in those sectors that it had invested in upgrading and modernizing their infrastructure, and that is what we have to do here in America.

Now, to get back, Mr. Chairman, to the point you were asking about, are there plans out there that are ready to go, when I went around the country in my Presidential campaign, I would take my Blueprint to Rebuild America book with me, and I had this thing where I set up in different cities and towns and I would get people



from the local government there, local buildings and trades, Mr. Georgine, to come, and they would have the blueprints of all of the projects that were ready to go.

I mean, they have already been designed, they are on the shelf, they can put people to work immediately. I do not think there was one city I visited that did not have that ready to go, sewer and water, bridge, roads, schools, community health centers—you name it—all to modernize the infrastructure, communications facilities, things like that, ready to go.

So I just buttress your argument that yes, we do not have to wait, they are out there—people can go to work right away on these. They are sitting out there right away, and it will put people to work, and the boost it will give the economy, like the Bank for International Settlements said, it is not just limited to the construction industry. It goes to the manufacturing, it goes even through food service, it goes through everything.

Perhaps those of us who are in this room today who were here in Washington during the building of the subway system might recall that during that period of time we had one of our lowest crime rates in the city of Washington, DC. People were working, they were making money, they were taking care of their families, and you had a low crime rate. The subway is done, people are out of work, we are not investing in new infrastructure—people are out of work, so I think there is a good case in point, and look what that subway system has done for this city and the environment around this city. That is an investment in the future. Cost a lot of money? Sure it did, but look what it did, and look what it is going to do for many years to come.

So again, Mr. Chairman, I do not want to belabor the point, but I just wanted to be here to add whatever voice of support I can to you and to these people who will be testifying today.

The business community in America that ships goods pays for the trucks standing in the traffic jams, they pay for the driver, they pay for extra fuel, they pay for the extra trucks that are needed, because the whole system is less efficient. The bottom line is, by improving our infrastructure, almost every business benefits in America, and our whole economy becomes more productive.

I am urging that President Clinton propose a stimulus package in February and that it not be a bare bones stimulus package but that it be a very meaty, stimulus package.

In my campaign, I talk about \$25 billion the first year to put out there. I do not know if we can get that high, but I still think it ought to be in that neighborhood. I hope that Congress will pass a stimulus package as soon as possible. It should not be a one-shot package. It should be an integrated program that is part of a long-term effort to improve America's infrastructure, the roads, railroads, airports, water and sewer systems, health care and education facilities as well. I do not see it just as a one-shot thing, I see it as the beginning of a lengthy process to bring into the 21st century many of our facilities which were built in the 19th century and thus make our economy more efficient and more productive so we can compete in the world marketplace.

So, Mr. Chairman, we have got to invest in America. I join with you in this, and whatever help and support I can give you I will do that.

Again, I congratulate you for having these hearings, and all of you who are here. Thank you for being here and for your support for the stimulus package. We need it, and we need it badly. Thank you.

Senator LAUTENBERG. Thank you very much, Senator Harkin. Whether it is from Iowa or New Jersey, the needs, I think, are obvious. I just want to ask Commissioner Downs a couple of questions.

In the design of the proposal, I talk about the State match, and in order to encourage States to come forward and take these packages, these programs, and go with them. We have asked for a waiver on just this portion. I would ask you whether that is a significant, in your judgment, part of the design, to make these programs more appealing?

Mr. DOWNS. Senator, it is for most States, but because of the actions you took in ISTEA about having New Jersey receive credit for authority capital, the soft match provision, we do not have a match requirement in the State of New Jersey.

I know that 11 to 19 States have said that they have from severe to extreme problems with match on an accelerated Federal program, so that yes, match will be a problem for a number of States.

Senator LAUTENBERG. Is there anything else that you can recommend that might expedite the expenditure of these funds in terms of program design, besides just getting the money out there?

Mr. DOWNS. One is that another survey recently showed that almost the majority of the States said that if the funds are increased within the legislative framework of the ISTEA legislation, make them the most flexible category possible so that States can make determinations about where money goes as quickly as possible.

Given the mandate that you have to obligate the money by the end of the year, certain categories of funds are much easier to use. For instance, the surface transportation program funds within the ISTEA legislation are easier to move within systems under ISTEA, so maximum flexibility within the law.

The second is an issue that had been raised about whether or not the full planning process, the TIP process and everything else that is laid out, whether new planning mandates within the Surface Transportation Act should apply to these accelerated funds.

Parts of those processes will inevitably slow down the delivery, and I am not suggesting that the planning process is either onerous or that it was inappropriate to target it for maximum participation with cities and counties within the United States, but that some of those requirements are lengthy, require multiple hearing processes, and that a look at the issues around planning and the timing issue would probably be helpful for most States.

Senator LAUTENBERG. Thank you very much. Thank you all for your participation and your comments this morning. They were very valuable. We look forward to being in touch with you in the future.

## PANEL TWO

I would now call the second panel, consisting of Charles Simpson of Morrison-Knudsen, Bob Gregg of Hughes Traffic Management Systems, and Pete Skarzynski of AT&T IVHS Communications Systems. Good morning, and welcome.

Mr. Simpson, in the order of things, you get to go first. You heard the admonition about the 5-minute rule. Again, there is a kindly chairman here, so we will let you go a little bit beyond if you must, but we ask you to limit your comments to 5 minutes. Thank you, and welcome.

## MORRISON-KNUDSEN

## STATEMENT OF CHARLES W. SIMPSON, CORPORATE SENIOR VICE PRESIDENT

Mr. SIMPSON. Thank you, Mr. Chairman and Senator Harkin for inviting Morrison-Knudsen to participate in this process this morning. I would quickly say that as a member of AGC we stand ready as a construction company to employ Mr. Wert's people and put them to work in New Jersey with some of these programs that he has on the shelf. We would also go to Iowa and look there for these, as well.

I am vice president of Morrison-Knudsen, and on behalf of MK chairman and chief executive officer, Bill Agee, it is my pleasure to participate in this panel exploring the benefits of transportation investment.

MK is an international company serving the environmental industrial process, power, and transportation markets. Transportation is the emphasis that MK has developed in the last 4 years, since Bill Agee became chairman of MK.

Transportation is the firstline infrastructure, and transportation systems are the backbone of our strong economy. The efficient movement of goods and people is essential to the development of any country.

We at MK are emphasizing rail transit at the present time. We started our transportation operation with transportation over water. We built Hoover Dam, we are building the Denver Airport at the present time, we are putting the third tunnel into Logan Airport at the central artery in Boston. We are very much involved in transportation.

More importantly, I think, for the future is that we are currently electrifying the Northeast corridor so that we can run electric trains at higher speeds from Washington, DC, all the way to Boston without having to stop for 15 minutes to change from an electric to a diesel engine in New Haven, CT.

We have been involved for 81 years in construction. We have been involved for the last 20 years in rail construction of all types, and we see that as the future. This is the vision of our chairman.

As a result, I want to talk specifically, I think, about rail, and how important this is to us. It is environmentally sound, it is fuel efficient, it will move people in the population centers of the country more efficiently and rapidly at lower cost than any other mode of transportation.

Highways, bridges, water transportation, air transportation certainly are all important, and we participate in all of them, but rail is a new industry that is being reestablished in the United States, and it is being reestablished in a number of ways.

In the past year, we have bid and won contracts to manufacture or remanufacture 1,300 passenger cars in the United States. We are a wholly owned American company. All of our stock is American-owned, with the exception of what might be out there somewhere else.

The most recent contract that we have won is to build the new Amtrak Viewliner cars. They will be built in Hornell, NY, and in Chicago, and the stainless steel bodies for those cars will be bent for the first time in the United States since the Budd Co. and the Pullman Co. closed their doors several years ago.

This is a new industry that is coming back, and it is moving very rapidly. The suppliers for those cars will come from across the United States—15 States will be involved—and this will be virtually 100 percent American product. I would argue that it would be 95 to 100 percent, rather than international. That may or may not be important, but the big thing is that we want to take this American product and export it. Not just build it for the United States, but to also help our balance of trade and put people to work.

As a result of these contracts just in rail, we have hired in the last 6 months 115 engineers to design and begin the process for many of these new cars. We have established three major manufacturing plants across the United States.

Hornell, NY, is our biggest operation, where we assemble and build heavy work as well as traction motors for rail. Chicago, we have gone into the South Side of Chicago, taken the old Pullman plant that has been closed for 15 years, have reopened it, and are now going to build shells for all of our cars in that plant in Chicago. We will be employing people in a depressed area.

We have gone to San Francisco and have reopened a USX plant there, a U.S. Steel plant, and are bringing our high tech operation—we have joined forces with Hughes Aircraft and Lockheed Space and Missiles to build the BART cars and to take off the shelf defense items and convert them to use for high-speed rail, or for all types of rail.

The next thing that we are doing is bringing high speed rail to the United States. We have the contract, the franchise to build a high-speed rail system in Texas.

In this case, we would have to bring the TGV from France, which is the best train in the world at the present time. It has carried 160 million passengers. There has never been an injury to a passenger because of an accident on that train. It travels 200 miles an hour, and we want to put it in service there.

That is not to say that that is the only high-speed train available, because we see the tilt train technology on the Northeast corridor that can use existing tracks. That is a new and exciting means of moving people faster, safer, and more comfortably in the 20th century.

These are some of the things that we are doing to reestablish an industry. The money that has been appropriated by this committee



is at work at the present time. More than it has appropriated will go immediately into those jobs and others for the benefit of the economy.

I made the red light.

#### PREPARED STATEMENT

Senator LAUTENBERG. Somebody had to. Thank you very much, Mr. Simpson. Your full statement will be inserted in the record.  
[The statement follows:]

#### STATEMENT OF CHARLES W. SIMPSON

Mr. Chairman, distinguished Senators, good morning, I am Charles W. Simpson, Vice President of Morrison Knudsen Corporation. On behalf of MK Chairman and Chief Executive Officer, Bill Agee, it is my pleasure to participate in this panel exploring the benefits of transportation investments. Transportation is first line infrastructure and transportation systems are the backbone of a strong economy. The efficient movement of people and goods is essential to the development of any country.

We at Morrison Knudsen are very pleased to see a resurgence of rail transportation in the U.S., an industry that has played a major role in the 81-year history of our company. MK is the only U.S.-owned manufacturer of new transit cars and passenger coaches and has provided the transportation industry with over 3,000 transit cars and 800 locomotives. Worldwide, we have also designed and constructed 20,000 miles of new railroad, over 360 miles of bored-tunnels and transit shafts, 18 railroad and repair shops, 27 major electrification projects, including the Northeast Corridor Improvement Project, and in the near future, the nation's first very high speed rail system.

In note of our strong position in the transportation marketplace, the Engineering News Record recently ranked Morrison Knudsen as the nation's leading transportation services company. Bill Agee was also named by The New Electric Railway Journal as its 1992 Railway Man of the Year "for his singular role in the restoration of the rail passenger car building industry in the United States."

Mr. Chairman, the resurgence in this industry is due in no small part to your leadership and the heavy-lifting done by members of this subcommittee to bring about change to the transportation priorities of our country. In addition, passage of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), was a watershed event, signalling that America's transportation policy has finally climbed out of its philosophical rut, where in the past, highways, airlines, and rail have acted as competitors.

For some time now, we have been carrying the message forward that the U.S. must change its transportation policy. Just last fall for example, Bill Agee noted in a keynote address to the American Railway Conference that the time had come to reorder our national transportation priorities. Agee noted that unlike highways and airports, railroads aren't gridlocked and overburdened by excess traffic and without adding track, railroads are capable of carrying four times the traffic they do now. Rail is the only mode of transportation that offers us a way to immediately begin easing the pressures on our transportation system.

As a result of a slow but gradual shift in our transportation policy, strong evidence is building to suggest that investments in rail transportation yields both short-term economic benefits in terms of jobs, and long-term economic benefits to the traveling public and the nation's economic productivity.

Calendar year 1992 was a good year for MK's transportation business where we won six major transit and passenger car orders, putting our total backlog at over \$1 billion in new orders. Contracts currently underway include a \$380 million order from METRA, the commuter rail system that serves northeastern Illinois; a \$209 million order from the Chicago Transit Authority; a \$155 million order from the California Department of Transportation (CALTRANS); a \$140 million order from the San Francisco Bay Area Rapid Transit (BART); a \$101 million order from the Metro North Commuter Railroad; and a \$100 million order from AMTRAK for a new generation Viewliner passenger coach.

#### RAILCAR MANUFACTURING

MK's Transit Division has three major railcar manufacturing facilities in the U.S. Our flagship facility, the center of our railcar design activities, is located in Hornell, NY, and has been open for over 10 years. The Hornell complex employs over 1000

people. And as result of our record backlog, we've also been able to open two new facilities last year in Chicago and Pittsburg, California, spreading our design and manufacturing capabilities from coast to coast.

On Chicago's south side, we've reopened the historic Pullman Standard Plant where workers are once again building passenger cars. Once it is in full production, the plant will employ approximately 400 workers. The plant also procures services and components nationwide and supports some 90 Chicago-area subcontractors. In addition, approximately 20 percent of the dollar value of the subcontracts are purchased from minority and disadvantaged businesses.

In Pittsburg, California, we are renovating a former U.S. Steel plant and will be turning out new state-of-the-art transit and passenger cars in early 1994. The Pittsburg plant is ideally positioned to serve both domestic markets and export opportunities in southeast Asia, particularly Taiwan.

#### LOCOMOTIVE MANUFACTURING

MK's Locomotive Division, for 20 years the nation's leading remanufacturer, has formed a new strategic alliance with Caterpillar to manufacture new locomotives for both freight and passenger railroads. Three new locomotive lines will be introduced this year and will include the world's first single-engine, 5000 horsepower locomotive, with 25 percent more power than the industry's current heavy-haulers.

MK and Cat will be introducing a locomotive powered solely by clean-burning natural gas. This 1200 horsepower switcher locomotive will answer environmental concerns railroads face when operating in congested areas such as Los Angeles and other large metropolitan areas in the U.S. and Latin America.

#### AMTRAK VIEWLINER AND NORTHEAST CORRIDOR

Mr. Chairman, no one in the Senate has done more to make the \$1.25 billion Northeast Corridor Improvement Project a reality than you. So considering your personal interest in the project, I wanted to update you on its status and give you yet another example, of how investments in rail transportation yield both short-term economic benefits in jobs, and long-term economic benefits to the traveling public and the nation's economic productivity.

Early last December, AMTRAK awarded MK with a \$100 million contract to design and manufacture 50 new generation Viewliner passenger cars, with options for up to 222 additional cars. The new generation Viewliner will be nearly 100 percent American made and subcontracts for its major components will come from 15 states. The cars will also have the first stainless-steel car bodies manufactured in the U.S. since the closing of the Pullman plant in Chicago and the Budd Company plant in Philadelphia many years ago.

MK is also leading the design and construction of the Northend Electrification Project, the \$295 million dollar project to complete the electrification of the Northeast Corridor from New Haven to Boston.

An independent contractor is now conducting the Environment Impact Statement. It will be concluded by early this summer and will immediately be followed by construction. Engineering and design work is also underway and will be completed by the end of the year. Total construction hours are estimated to include 660,000 manhours of work in Connecticut, 480,000 manhours in Rhode Island, and 390,000 manhours in Massachusetts. The project's craft labor will be represented by the International Brotherhood of Electrical Workers.

As you know Mr. Chairman, the project is on an aggressive timetable. And we believe that keeping it on a fast-track maximizes the project's economic stimulus and sends a strong signal to the traveling public that a resurgent AMTRAK can play an important role in the nation's transportation future. Given AMTRAK's dominance in the New York to Washington, D.C. market, we know very well how the public will respond to reduced travel times between New York and Boston. By freeing up take-off and landing slots at the region's crowded airports, the project's speedy completion will also benefit those not traveling on the line.

#### DEFENSE CONVERSION

Technology transfer from the aerospace and defense industries to surface transportation systems is logical as we move into the 21st century and post cold-war economy. Today, given new interest in rail, top engineers and designers have already begun to transfer their talent and imagination to the rail industry. In the last 12 months alone, our railcar design facility has added 115 new engineers, with the majority having defense and aerospace experience.

Defense conversion also represents a significant opportunity to integrate new technologies to an industry that has seen little in the way of technical advances for some 20-30 years. Last year for example, MK developed a solid-state microprocessor based door closure system for transit cars. This patented system eliminates some 600 mechanical switches in a typical multi-car configuration and is destined to become an industry standard.

To further develop promising technologies from our defense industries, MK has formed new strategic alliances with Hughes Aircraft Company and the Lockheed Missiles and Space Company. Already we are working with Hughes to modify a sophisticated battlefield command and control system and incorporate it into a state-of-the-art advanced train control system. Other new technologies under development by MK-Hughes-Lockheed engineers will be applied to railcars and locomotives being manufactured at MK facilities nationwide.

#### HIGH SPEED RAIL

Mr. Chairman, we've talked about the need to reorder and balance our transportation priorities and the economic impact of investments made in our transportation infrastructure. However, this discussion would not be complete if I did not take a moment to talk about the future. Because today, even though our interstate highway system is finished and our domestic air travel system is well established, both are operating at levels well beyond their capacity.

The costs our inadequate infrastructure imposes on our economy and international competitiveness are well known. In the next 20 years, congestion will quadruple on our interstates, double on our highways, and increase ten-fold in rural areas. This year Americans will be forced to waste two billion hours and three billion gallons of fuel sitting in traffic, costing us \$32.5 billion in lost wages and fuel. At our airports, the picture is not any brighter where air travellers sit through 20,000 hours of flight delays each year, imposing an annual cost of \$50 billion in wasted time and fuel.

Clearly, the stakes are even higher when we begin to measure the costs to the environment. Sixty-eight cities are failing federal air pollution standards for ozone and almost as many cannot meet carbon monoxide guidelines. Over 100 suburban areas exceed the limits. All told, 150 million Americans live in areas where the air quality is below acceptable levels. The American Lung Association estimates the national health care bill for air pollution alone is \$40 billion per year.

So how can we accommodate our growing transportation needs? By building additional highways and airports? Even if we could build more highways and airports quickly—and clearly we can't—our transportation problems could not fully be addressed. In order to make wise transportation investments for the future, we have to take a look at the comparative costs and benefits of the various modes of transportation. Fairness should be the guiding principle.

Mr. Chairman, high speed rail is the missing link in our nation's transportation system. Plans for projects are now under development in many states, but in order to make high speed rail a reality by the end of the decade, strong national leadership will be required—like that exercised in an earlier day to build the nation's highways and airports.

On trips of less than 400 miles, high speed rail is one of the most efficient ways to transport inter-city passengers. On a passenger mile-basis, high speed rail uses less than ¼ of the energy of a commercial airliner, less than ½ the energy of an automobile, and significantly reduces air pollution. In terms of safety, high speed rail systems have hauled billions of passengers in Europe and Japan without a single passenger fatality.

A set of policy actions can help overcome the obstacles to high speed rail development and mobilize private capital in a partnership with government. The policy actions include:

- (1) Full funding for ISTEA will make available technology demonstration grants for high speed rail projects. Monies appropriated for defense conversion may also be a suitable funding source for demonstration programs.

- (2) Leverage federal monies to attract private investment through the loan guarantee program authorized under the Railroad Revitalization Act of 1976.

- (3) Establish a Right of Way Revolving Fund to assemble rights-of-way early in a project's development.

- (4) Establish a Surface Transportation Trust Fund to provide a long-term, low cost co-funding source for basic high speed rail infrastructure. Modeled after existing trust fund programs for airports and interstate highways, the fund would be repaid through a ticket tax similar to the airline ticket tax.



(5) Create bond insurance funds, like those under discussion of the Infrastructure Investment Commission, to maximize private sector investment in high speed rail.

(6) Create a new High Speed Rail Administration within the Department of Transportation to focus on intermodalism and developing alternatives for high speed rail.

(7) Remove high speed rail projects from state volume caps for tax exempt financing to put them on the same footing as airports and seaports.

#### CONCLUSION

Mr. Chairman, we are very optimistic about the future of rail in the U.S. With all of the technological advancements taking place in rail transportation and manufacturing, rail simply does not live up to its reputation as an unsophisticated industry in decline. It is clear that investments in the nation's rail transportation system yield both short-term economic benefits in jobs, and long-term economic benefits to the economic productivity.

### HUGHES TRAFFIC MANAGEMENT SYSTEMS

#### STATEMENT OF BOB GREGG, PRESIDENT

Senator LAUTENBERG. Next, we will hear from Mr. Robert Gregg, the president of the Hughes Traffic Management System. We look forward to your testimony.

Mr. GREGG. Thank you, Mr. Chairman.

I am the head of a new startup company, a subsidiary of Hughes Aircraft Co. This startup company is exclusively oriented toward the IVHS Program, so I am especially pleased to be here today, and to comment about that program.

First, a word about Hughes. Hughes began with Howard Hughes' design of experimental aircraft in rented hangars in southern California. And today, we are a leading high technology electronics systems business, with worldwide sales of about \$8 billion. We have a global work force of about 60,000 people. We have Hughes operations in about two dozen States and a dozen countries.

Hughes has made some important contributions to the United States. We invented the laser, the geosynchronous satellite, radar-guided air-to-air missiles, the lunar lander, and a large number of exotic sensors, many of them space-based.

At Hughes we have an aggressive program to reduce our dependency on military contracts. And we are developing new systems for a wide range of civilian applications. In the transportation area, the synergy between Hughes and its parent, General Motors, and its sister subsidiary, Delco Electronics, has resulted in an array of electronic automotive products and components and in technological breakthroughs in areas like electric cars, an apropos of today's subject. The association with General Motors has led Hughes to an involvement in the Intelligent Vehicle Highway System.

Recognizing that IVHS represents a major new market opportunity, Hughes began exploring the possible applications of its technology in 1988. And in the intervening period, we have successfully conducted IVHS demonstrations of several communications, radar, command and control, infrared, and other technologies. And these successful demonstrations have led us to make the decision to take a plunge into the IVHS area.

In my written statement, I provided additional insight into this startup company, and I commented on three generic policy-level problem areas that, in our opinion, may limit the successful early



deployment of IVHS. I gave you comments in the area of procurement, privatization, and regulatory action.

In closing, I would like to mention again that Hughes has demonstrated the viability of applying defense technology to the IVHS challenges and, based on that success, has committed to making a business in the IVHS infrastructure market.

With respect to the issues I cited, as the members of this subcommittee know all well, IVHS is not a normal Federal program. This is a program of unprecedented scope, and requires the broadest support from both the public and private sectors. This panel today is focusing on the actions of the private sector, but it is appropriate for us to be mindful of the continued congressional support that will be required as we move forward in the research and early deployment phases of this important program.

Thank you very much.

#### PREPARED STATEMENT

Senator LAUTENBERG. Thank you very much, Mr. Gregg. Your full statement will be made part of the record.

[The statement follows:]

#### STATEMENT OF ROBERT W. GREGG

##### INTRODUCTORY REMARKS

Mr. Chairman, Senators and Staff, good morning. My name is Robert W. Gregg, and I am the president of Hughes Traffic Management Systems, a company dedicated to supplying systems for the infrastructure portion of the Intelligent Vehicle Highway System (IVHS). We're especially pleased to be able to comment on the status of that important program today and thank you for this opportunity.

##### HUGHES AIRCRAFT COMPANY OVERVIEW

For four decades, Hughes has engaged in the design, production and support of high-technology electronic systems for military, commercial and scientific use. What began with Howard Hughes' design of experimental aircraft in a rented hanger in Southern California has flowered into a leading high-technology electronics systems business with worldwide sales of about \$8 billion annually. Today, almost a third of its global workforce of 62,000 people is made up of scientists and engineers engaged in some 1,700 programs and projects, with operations in nearly two dozen states and a dozen countries.

As a leader in technology, the company has been at the forefront of the electronics revolution. Among Hughes' pioneering contributions were the laser, the geosynchronous satellite and its application to commercial communications, the radar-guided air-to-air missile, the lunar lander, the monolithic infrared imaging focal plane array, the airborne programmable radar signal processor, the ion engine, and the long-wavelength infrared-space sensor. The array of product lines now includes airborne and ground-based radars, satellites, military command and control and civilian air traffic control systems, guided missiles and torpedoes, infrared and electro-optical systems, communications systems, simulators, computers and displays, and power systems for electric vehicles.

Hughes has a program of internal investment to develop systems businesses in nondefense areas. Major new systems for a wide range of civilian applications—systems that assist in handling massive amounts of mail for the U.S. Postal Service, state-of-the-art building security systems like that protecting the Smithsonian Institute, and electronic identification systems for a whole range of uses—are progressing.

In the transportation area, the synergy between Hughes, its parent, General Motors, and its sister subsidiary, Delco Electronics, has resulted in an array of electronic automotive products and components and in technological breakthroughs for electric cars. For drivers, an automotive heads-up display—based on technology developed for jet fighter pilots—for current GM models can project speed, turn signals and fuel level information directly into the driver's forward field of vision, allowing

the driver's eyes to stay fixed on the road ahead. A holographic rear window stop light that warns motorists behind in traffic when the driver applies the brakes is invisible to the driver and so doesn't obstruct the rear vision. Finally, the association with General Motors has led Hughes to an involvement in the Intelligent Vehicle Highway System (IVHS).

#### HUGHES AIRCRAFT COMPANY AND IVHS

Recognizing that IVHS represents a major new market opportunity, Hughes Aircraft Company has formed "Hughes Traffic Management Systems (HTMS)." The mission of HTMS is to deploy advanced electronics systems that optimize the performance of the surface transportation infrastructure. Initially, HTMS is focused on integrating advanced systems for the electronic collection of toll revenue in that rapidly expanding market. Later, opportunities exist to integrate advanced sensor, communication, processing, control and display elements to implement the "smart highway" portion of IVHS. This IVHS infrastructure could also support other commercial applications that may present opportunities beyond IVHS, including communications, data (transaction) processing, and information systems.

Hughes' HTMS unit has been working to earn market credibility by participating in high visibility projects (such as TravTek in Orlando) and demonstrating advanced technology solutions. In 1993, Hughes' HTMS unit is pursuing programs in advanced traffic management systems and electronic toll collection projects in the U.S. and abroad.

A source of competitive advantage for HTMS comes from the technical expertise of its parent. Hughes has been a leader in the development and integration of sophisticated sensor, communication, command and control, and display systems. Hughes' experience in air defense and air traffic control systems is a logical basis for the development of complex, integrated surface transportation management systems.

Hughes' ultimate parent company, General Motors Corporation, is the world's largest producer of transportation equipment. In developing its IVHS expertise, Hughes' HTMS team has gained valuable insights from other members of the GM family with complementary expertise, especially Delco Electronics (vehicular electronics and high volume manufacturing of vehicle electronics) and Electronic Data Systems (large-scale data processing).

#### IVHS OBSERVATIONS AND RECOMMENDATIONS

I would like to conclude my prepared remarks with some observations about potential problems in the early IVHS efforts and to recommend some areas in which the federal government could provide further assistance. These observations address general issues relating to the procurement process, financing and the regulatory process.

#### A PROCUREMENT SYSTEM ISSUE

IVHS infrastructure systems will be procured by state, regional, county and local government agencies. These agencies may need to fundamentally alter their procurement practices to support the rapid deployment of IVHS. In general, the state departments of transportation have evolved a procurement system oriented toward commodities such as concrete, asphalt and guardrail, traditional products in the civil engineering and construction business. IVHS will require these same agencies to procure complex, geographically distributed electronic systems—not unlike those procured by the Department of Defense. There appears to be a "gap" in the procurement system's capability to support IVHS. This gap may be sufficiently large to greatly delay the realization of IVHS benefits and to raise the market entry cost and risk for the private sector firms trying to introduce the new technology products required for IVHS implementation.

Today the procurement of a typical highway project is accomplished using a two-step process. The procuring Agency hires a firm to design the highway project. This firm produces the Plans, Specifications and Estimates (PS&E) which the Agency uses in soliciting bids from vendors and contractors. The design firm is considered to be totally unbiased in the choice of technology and product and is excluded from supplying equipment to the project. A separate set of contractors and vendors submit bids for the specific equipment and services specified in the PS&E. The industry that supports these Agencies is clearly partitioned between designers and suppliers of products and services.

Marketing a product based upon technology new to the highway marketplace is therefore also a two-step process. The technology product firm must begin its mar-

keting effort by "selling" its product to the design firms, so that they will "design in" the new technology product. Considerable missionary work must be done. It is not until a design firm has released a PS&E calling for this new technology product that the technology firm has an opportunity to sell its product. At least three years would pass before a product sale could be made (a year marketing to the design firm, a year for this firm to do its design, and a year for the procurement process for design and bid contracting). During this time, the product firm must finance itself without revenue and must operate with delayed feedback on the market success of its product.

The Agency personnel (and their available consultants) also suffer as they procure IVHS electronic systems. These are largely traffic engineers and civil engineers with limited training and experience with the high technology products called for in the IVHS program. The design firm (itself mainly staffed with traffic and civil engineers) completes its design and leaves the Agency with the job of managing vendors and contractors supplying technologies and products that it does not understand.

We believe that an examination of the procurement system used by the Department of Defense for acquiring new technology electronic systems may suggest remedies to some of these problems. In our view, such an examination has the promise to improve the quality of the procurement process, to reduce the risk in introducing new technology, and to shorten the time-to-market for new technology IVHS products.

DOD expects that a single contractor (or team of contractors) will design and build a new system and issues a Request For Proposals (RFP) to initiate such a procurement. The responding firms propose the design and development in an integrated manner. The Agency is not involved in bridging the integral link between design and build for the new system. Instead the Agency uses a requirements document, free of design implications, to discipline the procurement process.

The need for Agency expertise is often solved by contracting with a high technology firm specializing in supporting the government's procurement process. Such firms are called System Engineering/Technical Assistant (SETA) contractors. The SETA may assist the DOD in developing the requirements put into the RFP and often supports the DOD in a technical advisory role during the contractor's design and build phases.

We believe that the nation's interest would be served by the federal government taking a leadership role in assisting the Agencies involved in procuring IVHS systems to develop a responsive, capable procurement system. The two examples cited above (two-step versus one step procurement and the use of SETA contractors) illustrate the advantages of extending our defense conversion thinking to include the IVHS procurement system.

#### A PRIVATIZATION ISSUE

There is a consensus that the introduction of "modern" toll roads, using Electronic Toll Collection (ETC), is a promising strategy for obtaining private sector participation in mitigating the surface transportation problems—particularly as a method of rapidly expanding the nation's infrastructure.

ETC allows new toll roads to be more efficient in their use of land and more attractive to the driver because of the reduction or elimination of delays associated with toll booths. This new technology is envisioned as being an enabler for the private sector as it engages projects to convert existing infrastructure or to build out new infrastructure. With ETC, the cost of recovering use fees (tolls) is decreased. At the same time, ETC offers greater customer convenience and satisfaction to those who use the new infrastructure. Each of these factors contributes positively toward privatization business considerations.

There are early signs of a related issue that may delay the benefits of a significant private sector participation. This issue is associated with financing the infrastructure conversion or build-out and specifically relates to the use of toll revenue bonds as the primary financing mechanism. Revenue bonds backed by the good faith and reputation of a financially strong state are relatively easy to place. By contrast, there is little experience with toll roads developed and operated by private companies, and the bond investment market is reluctant to purchase revenue bonds financing such private ventures.

Part of this reluctance derives from the absence of the deep pockets of the public sector as a backstop for the investors. This is a classic "chicken and egg" problem, and it may persist until there have been a few successful privatization projects.

We believe that it is necessary for the Federal Government to provide initial support to the privatization initiative to enable the rapid implementation of this key aspect of the IVHS vision. The first concept that comes to mind is that of federal



guarantees for the revenue bonds. Other support concepts might include allowing private contractors to issue tax-exempt bonds and extending the provisions of the Tart Claims act to protect the private contractor to the same extent as the federal government.

#### A REGULATORY ISSUE

Communications are a critical element in IVHS, and this subject is receiving special attention from the FHWA in 1993 as that agency begins an ambitious program to define a national IVHS architecture. Vehicle to roadside communications is at the heart of ETC systems as well as in first generation "smart traffic management systems."

An important IVHS communications debate is currently taking place under the auspices of Federal Communications Commission's rule making authority. The stolen vehicle recovery industry and the electronic toll collection industry are vying for the same radio frequency spectrum. As you know, spectrum is a difficult resource to acquire. In the absence of IVHS considerations, one could dismiss this debate as "business as usual", however it may be that the long term interests of IVHS are at issue. Many believe that the emerging ETC systems are harbingers of tomorrow's "smart communication systems."

This communications example is only one of many that have the potential to prejudice the deployment of IVHS. In this specific case, the electronic toll collection industry is asking the Federal Highway Administration (FHWA) to support their position, and we are optimistic about a favorable outcome. However, we are concerned that this example may hint at a systemic problem in launching the national IVHS program. We are in the initial stages of IVHS deployment and, at least on the industrial side the constituency is small. It is likely that in the years to come we will have to call for legislation to undo decisions made in the absence of an IVHS vision.

Notwithstanding the important role being played by the FHWA and its advisory organization, the Intelligent Vehicle Highway Society of America, the success of IVHS will require the continued active support of the Congress.

#### CLOSING REMARKS

In closing I'd like to remind you that Hughes has demonstrated the viability of applying defense technology to the IVHS challenges and based on that success has committed to making a business in the IVHS infrastructure market. We are confident that other defense electronics firms will join us in this market and that together we will be able to support an early, successful deployment of IVHS.

Finally, with respect to the issues raised earlier, as the members of this subcommittee know, IVHS is not a normal federal program. It is a program of unprecedented scope and requires the broadest support from both the public and private sectors. Today we are focusing on the actions of the private sector, but it is appropriate for us to be mindful of the continued congressional support that will be required as we move forward in the research and early deployment phases of this important program.

It is an honor for me to appear before the Subcommittee so directly responsible for our IVHS program. Thank you for the opportunity to share our views.

#### IVHS PROJECTS, AT&T

#### STATEMENT OF PETE SKARZYNSKI, MANAGING DIRECTOR

Senator LAUTENBERG. Mr. Skarzynski.

Mr. SKARZYNSKI. Mr. Chairman and members of the subcommittee, as managing director of AT&T IVHS Communications Systems, I am pleased to address your hearing on transportation and the economy.

I welcome this opportunity to provide our observations on the significance of Federal investment in IVHS and how it has stimulated this emerging industry.

IVHS is a name given to a broad range of new technologies that can revolutionize the efficiency and safety of both highways and automobiles. Additionally, these IVHS technologies can be extended into commercial vehicle operations and mass transit. IVHS will allow for an increasing number of vehicles and commuters to use



the existing transportation infrastructure more efficiently and with fewer accidents. It holds the promise of reducing the 2 billion hours a year U.S. commuters spend unproductively in traffic jams.

Today, I would briefly like to tell you of AT&T's experience in some selected products, many of which are a result of direct Federal funding. While AT&T's core competencies lie in the efficient movement of information on communications highways, until recently our role in the highway transportation sector was limited to providing traditional communications products and services.

With the signing of the Intermodal Surface Transportation Efficiency Act, we expanded our vision, with an emphasis on communications and information technologies can be utilized to solve challenges of traffic congestion, safety and the environmental impact associated with our current surface transportation system.

AT&T's efforts in IVHS began over 4 years ago with our participation in the federally sponsored Mobility 2000 study and as a founding member of IVHS America. Our efforts leverage our strengths in communications and information movement and management, to better manage the roadway, to reduce congestion, to provide travelers information resulting in reduced stress and to minimize travel incidents.

AT&T's vision is that the Nation's congested transportation corridors will become communications and information corridors as well. We envision giving travelers safe and efficient transportation through the extension of information services that we are accustomed to receiving in our homes and in offices. In order to realize this vision for the future of transportation, AT&T has expanded research and development laboratories at Bell Laboratories located in New Jersey to develop, test and trial new transportation applications.

AT&T is currently active in developing systems for transportation authorities and for the traveling public. We have undertaken a number of projects and trials of new technologies born out of our technical strengths and emerging technologies. Key to the development of these systems is our philosophy for providing technical platforms that are growable for future applications.

Such core technologies include: Intelligent transmission networks and equipment such as optical communications that provide bandwidth for the collection of traffic data alongside the highway; image and video processing technologies for the capture and transmission of more accurate traffic information over a network; wireless communications for transmission of information to vehicles, and for a new generation of traffic sensors that can replace existing highway detectors at less cost; speech recognition technologies for the delivery of travel information that allow for a friendly and safe interface while the vehicle is moving; and smart cards that allow for automation of transactions.

Smart cards are personal, portable computers embedded with processing on a credit card sized device that fits into a wallet. These cards can be used with a variety of terminals, including ones installed in automobiles, which connect to traffic networks through wireless communications. A smart card can be used for multiple purposes, including toll collections, transit passes, commercial vehicle fuel payment systems, and computerized driving records.

AT&T is currently working to install these technologies, creating a seamless information and communication system for transportation authorities and for travelers. Many of the demonstrations are a result of direct government funding, which have encouraged local and State agencies to broaden their horizons on the benefits that can be derived.

Let me briefly highlight some of the examples of AT&T's IVHS projects.

In San Antonio, AT&T is providing an end-to-end digital fiber backbone transmission network, allowing interconnection of video and other vehicle monitoring devices to the traffic operations center. This system is a state-of-the-art communications network enabling the highway authority to implement advanced traffic management techniques.

In Orange County, CA, for the new toll roads called Transportation Corridor Agencies, AT&T is providing a similar communications network and a smart card based toll collection system that will give users access to multiple services, including parking access, concession payments, and priority access to high occupancy vehicle lanes.

In Delaware, working with the Department of Transportation on a federally funded operational test project, AT&T is providing a transit system for electronic fare payment using smart cards. A more efficient cash collection process giving the ability to analyze comprehensive ridership data are two of the benefits. Additionally, the smart card can be used by employers who wish to encourage the use of mass transportation by subsidizing their employee travels.

The New Jersey/New York metropolitan area poses a number of complex transportation challenges. AT&T is currently involved in a number of procurements, including a regional toll collection system across seven highway agencies, with the obvious benefits of reduced toll collection expenses and lessened congestion at toll plazas. Also included are intermodal highway, parking, transit access trials providing commuters enhanced travel options.

These projects, along with other similar initiatives in other parts of the country, all emphasize the use of technologies to integrate multiple traffic applications across authorities. These systems provide for easier, friendly user interfaces to transportation systems. These trials demonstrate that these technologies can be combined to create new consumer based services that allow for more informed travel decisionmaking, both prior and during a trip. The benefits include a more efficient movement of people and goods, reduced congestion and its resulting air pollution.

Additionally, continued development of these systems in the United States will afford us opportunity to sell systems in export markets. The Nation could ultimately move from a concrete-based to an electronics-based transportation system.

Mr. Chairman, many of these projects benefit from Federal leadership and financial support. AT&T encourages you to continue your leadership role in encouraging and supporting public sector agencies to upgrade their infrastructures. Federal funding for the development of technical architecture standards, training of public transportation sector personnel, stimulating additional field oper-

ational tests and the joint deployment of new technologies are specific tasks appropriate for the Federal Government.

Thank you very much, Mr. Chairman.

#### PREPARED STATEMENT

Senator LAUTENBERG. Thank you very much, Mr. Skarzynski. Your full statement will be inserted in the record.

[The statement follows:]

#### STATEMENT OF PETER A. SKARZYNSKI

Mr. Chairman and members of the Subcommittee, my name is Pete Skarzynski, and I am the Managing Director of AT&T IVHS Communications Systems. AT&T is pleased to address your hearing on transportation and the economy. I welcome the opportunity to provide our observations on the significance of the federal investment in Intelligent Vehicle Highway Systems (IVHS) and how it has stimulated this emerging industry.

IVHS is a name given to a broad range of new technologies that could revolutionize the efficiency and safety of both highways and automobiles. Additionally, these IVHS technologies can be extended into commercial vehicle operations and into mass transit. IVHS will allow for an increasing number of vehicles and commuters to use the existing transportation infrastructure more efficiently and with fewer accidents. It holds the promise of reducing the two billion hours a year U.S. commuters spend unproductively in traffic jams. Today, I would like to briefly tell you of AT&T's experience with some selected projects, many of which result directly from federal funding.

While AT&T's core competencies lie in the efficient movement of information on communications highways, until recently our role in the highway transportation sector was limited to providing traditional communications products and services. With the signing of the Intermodal Surface Transportation Efficiency Act we expanded our vision with an emphasis on how communications and information technologies can be utilized to solve challenges of traffic congestion, safety and the environmental impact associated with our current surface transportation system.

AT&T's efforts in IVHS began over four years ago with our participation in the federally sponsored Mobility 2000 study and as a founding member of IVHS America. Our efforts leverage our strengths in communications and information movement and management, to better manage the roadway, to reduce congestion, to provide travelers information resulting in reduced stress and to minimize travel incidents.

AT&T's vision is that the nation's congested transportation corridors will become communications and information corridors as well. We envision giving travelers safe and efficient transportation through the extension of information services that we are accustomed to receiving in our homes and offices. In order to realize this vision for the future of transportation, AT&T has expanded the research and development laboratories at Bell Laboratories located in New Jersey to develop, test and trial new transportation applications.

AT&T is currently active in developing systems for the transportation authorities and the traveling public. We have undertaken a number of projects and trials of new technologies borne out of our technical strengths and emerging technologies. Key to the deployment of these systems is our philosophy for providing technical platforms that are growable for future applications. Such core technologies include:

- Intelligent transmission networks and equipment such as optical communications that provide bandwidth for the collection of traffic data alongside a highway;
- Image and video processing technologies for the capture and transmission of more accurate traffic information over a network;
- Wireless communications for transmission of information to vehicles, and for a new generation of traffic sensors that can replace existing highway detectors at less cost;
- Speech recognition technologies for the delivery of travel information that allow for a friendly and safe interface while the vehicle is moving; and
- Smart cards that allow for automation of transactions. Smart cards are personalized, portable computers with embedded processing on a credit card sized device that fits into a wallet. These cards can be used with a variety of "terminals" including ones installed in automobiles, which connect to traffic networks through wireless communications. A smart card can be used for multiple pur-



poses, e.g., toll collection, transit passes, commercial vehicle fuel payment systems and computerized driving records.

AT&T is currently working to install these technologies creating a seamless information and communications system for transportation authorities and for travelers. Many of the demonstrations are a direct result of government funding which has encouraged local and state agencies to broaden their horizons on the benefits that can be derived. Let me briefly highlight some examples of AT&T's IVHS projects:

- In San Antonio, AT&T is providing an end-to-end digital fiber backbone transmission network, allowing interconnection of video and other vehicle monitoring devices and the traffic operations center. This system is a state of the art communications network enabling the highway authority to implement advanced traffic management techniques.
- In Orange County, California, for the new toll roads called the Transportation Corridor Agencies, AT&T is providing a similar communications network and a smart card based toll collection system that will give users access to multiple services, including parking access, concession purchases and priority access to high occupancy vehicle (HOV) lanes.
- In Delaware, working with the Department of Transportation on a federally funded operational test project, AT&T is providing a transit system for electronic fare payment using smart cards. A more efficient cash collection process giving the ability to analyze comprehensive ridership data are both two of the benefits. Additionally, the smart card can be used by employers who wish to encourage the use of mass transportation and by subsidizing their employee travels.
- In Arizona, working with a number of partners in a public-private partnership, we have submitted a proposal under the congestion pricing demonstration program for HOV lane access that will generate new funds for investment into new transportation systems.
- The New Jersey/New York metropolitan area poses a number of complex transportation challenges. AT&T is currently involved in a number of procurements including a regional toll collection system, across seven highway agencies, with the obvious benefit of reduced toll collection expenses and lessened congestion at the toll plazas. Also included is a intermodal highway, parking and transit access trial providing commuters enhanced travel options; sonar roadway sensor trials; and a travel information service where travelers can access the latest traffic information and bus or train schedule.

These projects along with other similar initiatives in other parts of the country all emphasize the use of technologies, to integrate multiple traffic applications across authorities. These systems provide for easier, friendly user interfaces into the transportation system. The trials demonstrate that these technologies can be combined to create new consumer based services that allow for more informed travel decisionmaking, both prior and during a trip. The benefits include more efficient movement of people and goods, reduced congestion and its resulting air pollution, safer travel. Additionally, continued development of these systems in the United States will afford us the opportunity to sell these systems in export markets. The nation could ultimately move from a concrete-based to an electronics-based transportation system.

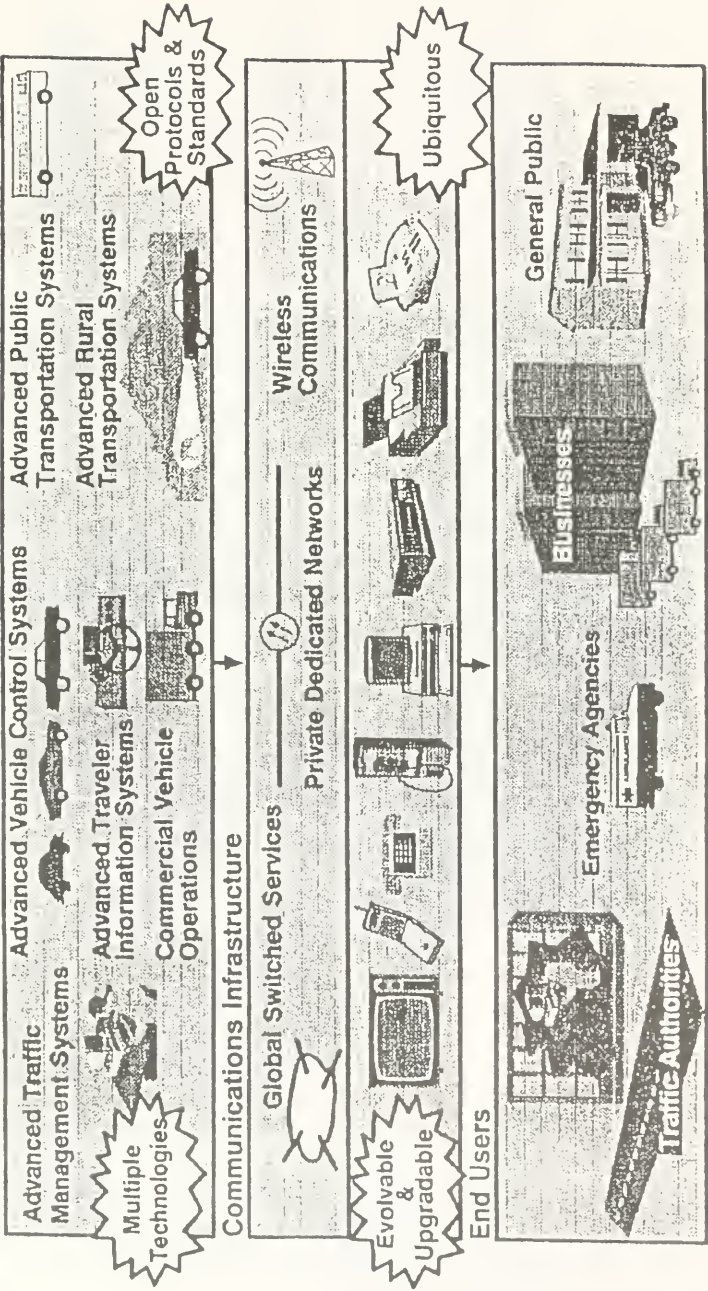
Mr. Chairman, many of these projects benefit from federal leadership and financial support. AT&T urges you to continue your leadership role in encouraging and supporting public sector agencies to upgrade their infrastructure. Federal funding for the development of technical architecture standards, training of public transportation sector personnel, stimulating additional field operational tests and the joint deployment of new technologies are specific tasks appropriate for the federal government.

Thank you, Mr. Chairman, for the opportunity to be present at these hearings and to share our vision and enthusiasm for this committee's effort to encourage industrial participation in applying our communications and information processing skills to the transportation sector.

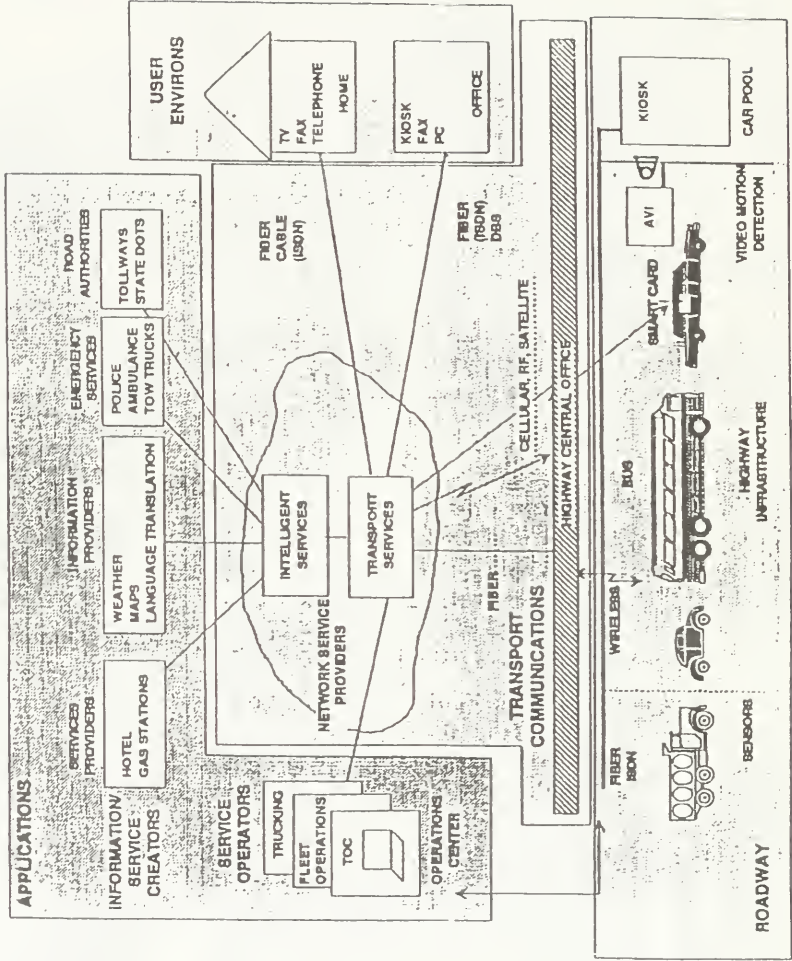


# AT&T IVHS Vision

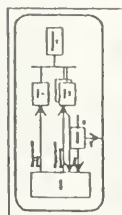
## IVHS Applications



# AT&T IVHS ARCHITECTURE



# AT&T IVHS TECHNOLOGIES



TRANSMISSION  
NETWORKS



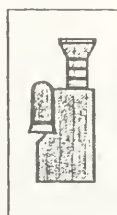
SMART  
CARD



SPEECH  
RECOGNITION



IMAGE  
PROCESSING



VIDEO



WIRELESS



ELECTRONIC TOLL  
TRAFFIC MANAGEMENT

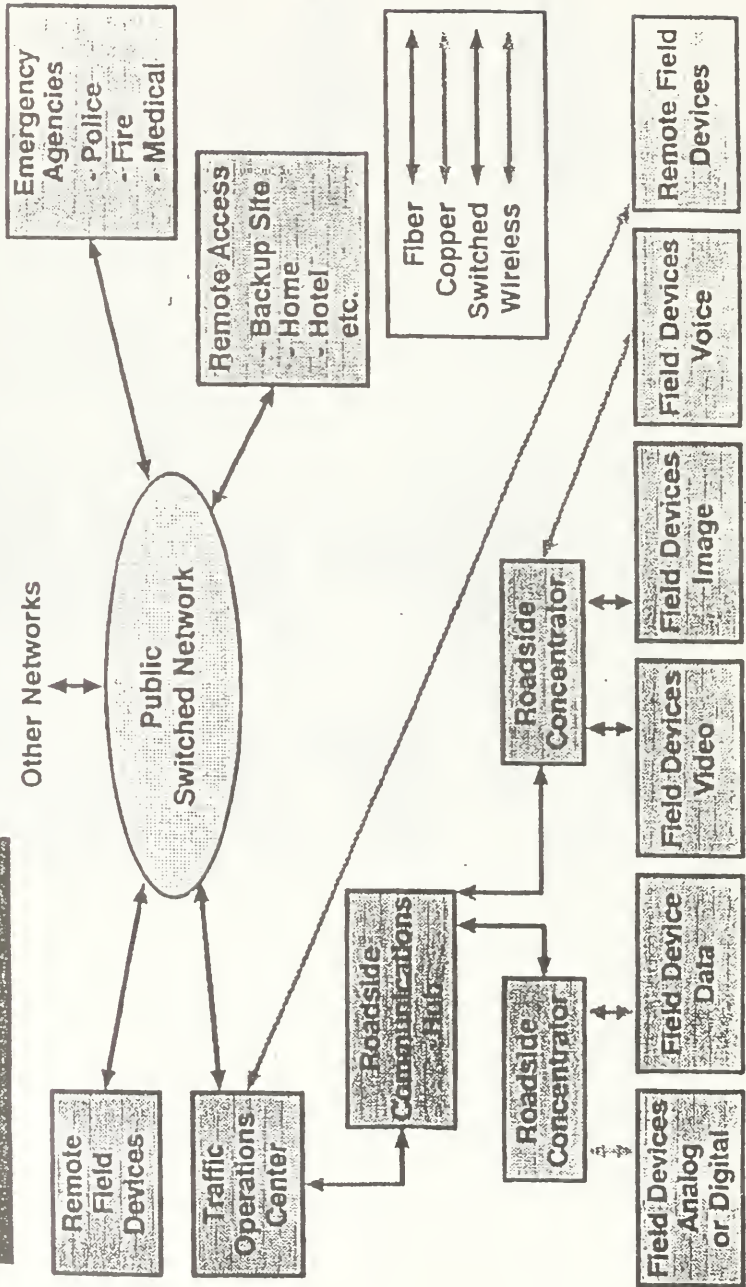


ADVANCED TRAVELER  
INFORMATION SYSTEMS



COMMERCIAL VEHICLE  
OPERATIONS

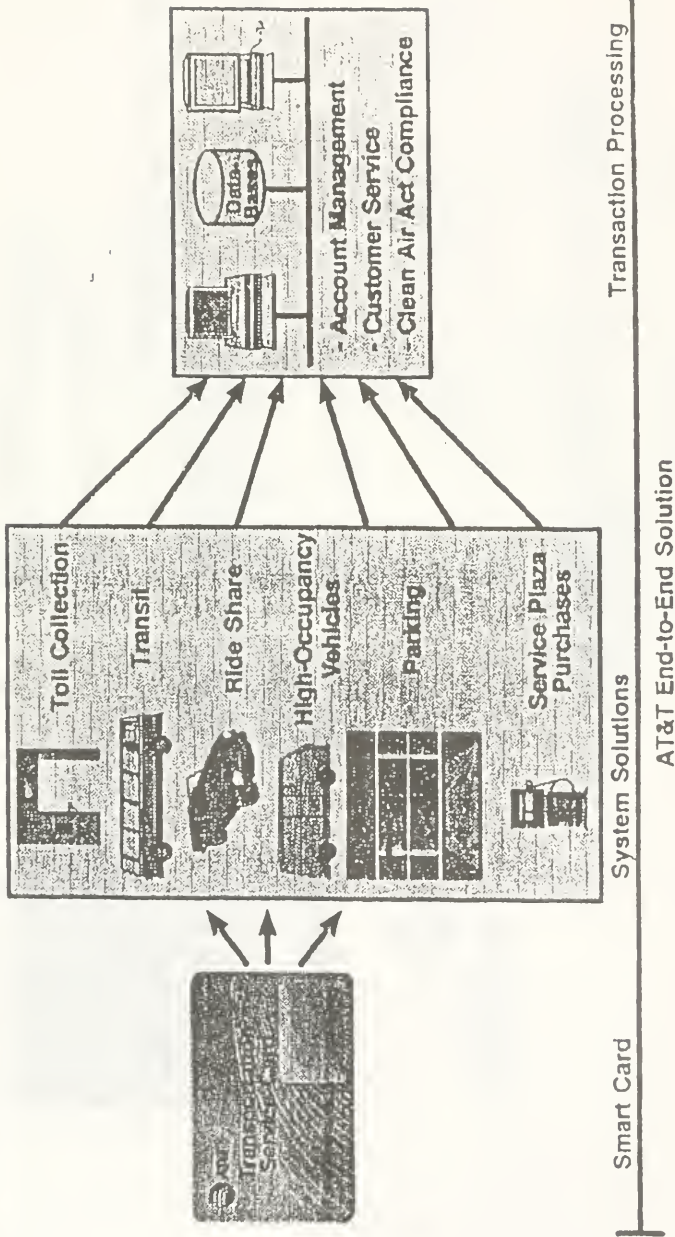
# AT&T IVHS Communications Infrastructure





# AT&T Intermodal Transportation System

"One Card, Many Services"



# AT&T SMART CARD SYSTEM

MICROPROCESSOR  
EEPROM

TRANSMIT & RECEIVE  
DATA PLATES

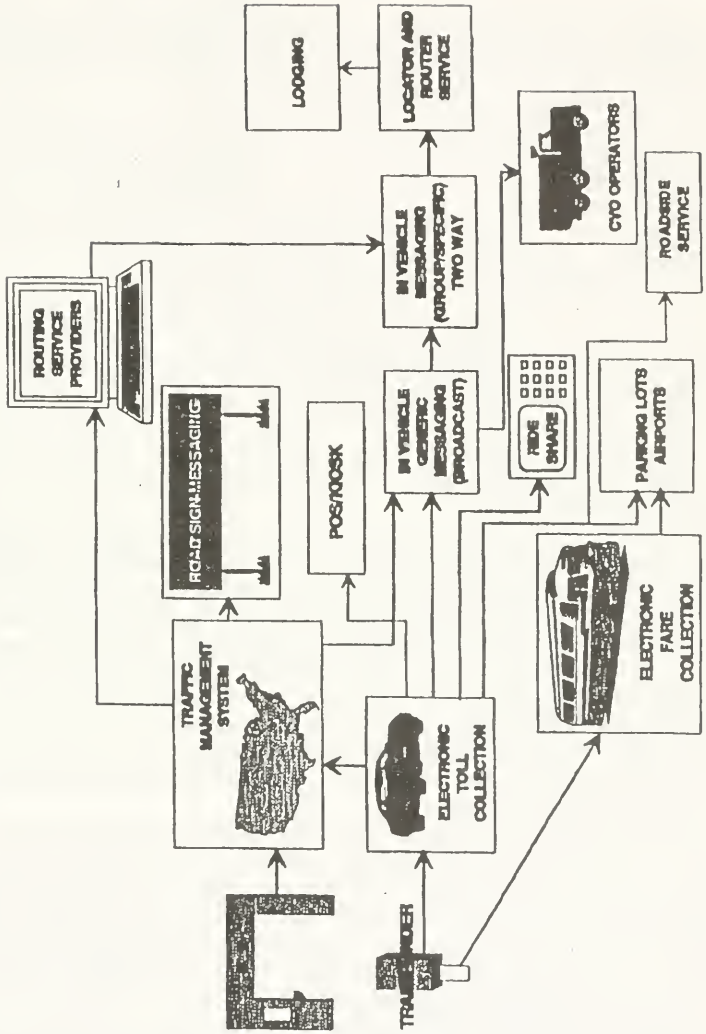


ANALOG

ETCHED COIL

- UP TO 8K BYTES OF MEMORY (EEPROM)
- 19.2 Kb/s ASYNCHRONOUS SERIAL DATA LINK
- ON-CARD OPERATING SYSTEM
  - MULTIPLE SECURE MEMORY PARTITIONS
- SECURITY SYSTEM
- CONTACTLESS INTERFACE
- MULTIPLE PHYSICAL FORMS

# AT&T'S ELECTRONIC TOLL AND TRAFFIC MANAGEMENT SERVICE EVOLUTION



## CONVERSION FROM A DEFENSE-BASED ECONOMY

Senator LAUTENBERG. It is interesting to me to see the kinds of companies that each of you represents, companies that have a long history of good products, and of being able to enforce your commitments with your own investments.

Looking today, Mr. Gregg, particularly at the conversion from a defense-based economy to one that includes much more interest or opportunity in the civilian sector, it appears that a lot of the training skills, structures, and production facilities that were developed to meet our defense requirements are transferable. And I think what each of you is doing is very important.

Mr. Skarzynski, thinking about that pocket computer that you described, I used to be in the computer business, and I was dismayed when I visited my old company a few years ago to see how much smaller the equipment was in the computer room at our principal facility in New Jersey. ADP is national; they have some 50 offices, with processing all around the country. And I asked if there was significant loss of business. And I was reminded that the technology had changed, so that compaction was the rule, though output continued to grow.

I do not want to go through the history of ADP and start with the humble beginnings and how hard we worked to create one of America's great companies, but the fact is that in the earliest days this company that today employs over 20,000 people worked with equipment that was, by today's standards, rudimentary. That was not a century ago, it was four decades ago, and how we continue to have more and more process power and information. And we ought to take advantage of these changes.

And is the same card that you talk about to be used universally for transit fares, for concession purchase, by coincidence, the one you have on your pocket.

Mr. SKARZYNSKI. I have on my pocket. I always come with a piece of technology. Actually, that is the smart card, but we see that being used for, as we mentioned, for multiple applications across authorities. And we are working with a number of agencies to look at strategies to move people from, say, single-occupancy vehicles into mass transit, and the idea of providing at least a seamless payment and access method.

There are similar cards under discussion. I believe in the State of Iowa, we have talked about putting other applications like health and medical benefits on to a card, cutting out the expense of the paper process involved.

Senator LAUTENBERG. You might affect the classified ads in some of the magazines and papers that have, person wants to meet person, or something like that, go into a data bank, and learn all kinds of things. But the application is of great interest, because what it does do with the Intelligent Vehicle Highway System is to increase the capacity of existing infrastructure. And that is really helpful. There are lots of places where concrete can no longer be poured.

And in a State like New Jersey, the most densely populated State in the country, and Mr. Simpson, in the State of Idaho, you



cannot build all the roads you want to for different reasons. Because nature has made it so difficult.

In my State, where we have so many people, we have to take advantage of the systems that we have, and this is of course one way to do it. And included in our ISTEA package was an investment in IVHS programs.

I want to just ask Mr. Simpson a couple of questions here. You got back into, or started in the rail business in the last few years, 1989; was that the kickoff date?

Mr. SIMPSON. We actually started building railroads 20 years ago; and remanufacturing transit cars, we started in the early 1980's. We have remanufactured for the New York subway system over 2,000 cars, beginning as early as 1981.

Senator LAUTENBERG. And how about new cars?

Mr. SIMPSON. New cars we are now turning out the first new cars we have manufactured for the Chicago Transit Authority, and we have about 80 of those on the line. And that has been in the last 2 years.

Senator LAUTENBERG. What caused your company to search for opportunities to serve that marketplace? This is a relatively recent change. What was happening that said to you and your management team that here is a business we ought to be investing in; let us make a conversion from what used to be a thriving business in this country, and is now practically nonexistent. What made MK decide to make the investment that they had to? How much have they invested so far in the superstructure necessary to produce railcars and engines and so forth?

Mr. SIMPSON. In 1988, Bill Agee became chairman and CEO of a company that had lost \$100 million the year before and \$81 million the year before that. He immediately sold off the shipbuilding business, which we had had since 1940, and also all of the real estate.

His vision was to take this sound oldline construction company and to expand, looking to the future, looking at the environmental problems, the efficiency of the Clean Air Act and other things, we were already remanufacturing, beginning our remanufacturing of locomotives, and also of transit cars. He saw that as the future. The congestion in the cities, the problem with space, of course.

Senator LAUTENBERG. How about Government policy?

Mr. SIMPSON. Government policy at that time was such that we were beginning to see an advance in mass transit. We were beginning to see, through the Appropriations Committee and also the authorizing committees, that there was a movement away from highways. The highway system was about to be completed.

We had the best freight railroad system in the world. But we did not have a good passenger railway system. He simply saw this as the future. He had also been to Europe and seen the transit system in Europe and Japan and felt that the United States would have to move in this direction. Electrification was the way to go.

Senator LAUTENBERG. A large part of that, then, was occasioned by Government decision and the willingness to invest?

Mr. SIMPSON. Absolutely.

Senator LAUTENBERG. As you know, this subcommittee and the Appropriations Committee was the facilitator for funding the ex-

pansion or revivification, if I can call it that, of Amtrak. It was on the chopping block and we had to fight very hard to keep it going.

But your company, I assume, saw in those decisions an opportunity to make investments and get people back to work.

Mr. SIMPSON. Absolutely. Amtrak was on the move. It was a viable operation, and we were in a position to assist in that.

Senator LAUTENBERG. What might be your backlog now for railcars?

Mr. SIMPSON. About 1,300.

Senator LAUTENBERG. And what kind of dollars are we talking about?

Mr. SIMPSON. We are talking about \$1.2 billion in backlog for railcars.

Senator LAUTENBERG. What kind of an employment impact might that have directly?

Mr. SIMPSON. As far as our manufacturing facilities, we will ramp up in Hornell, it will probably, with the first phase of this, it will mean somewhere in the neighborhood of 5,000 employees not just in Hornell, but across the country.

Senator LAUTENBERG. That includes subcontractors, suppliers, et cetera?

Mr. SIMPSON. The subcontractors would expand substantially on that. We will have ourselves somewhere between 4,000 and 5,000 of our own employees.

Senator LAUTENBERG. And your projections are that the demand will be there to keep this work force either level or growing over the—

Mr. SIMPSON. The demand has to be there because of meeting the Clean Air Act requirements in the United States. And on top of that, we, with the new types of railcars being built, they are not rebuilding old cars. This is next century. You are going to see the defense conversion go into some of these cars, especially in California, for the first phase, that are going to make them a brand new car that are going to be in demand.

Senator LAUTENBERG. You know, we talk about congestion relief, about more productivity, about meeting the environmental standards, but we do not see a lot of talk about the reduction in demand for imported oil, which could have a very significant impact on our balance of payments, as well as our pure dependence on others to supply our energy needs. But it certainly is a significant factor if we can continue to pull people from private cars, put them in high occupancy vehicles, and make the system generally more efficient, then it is going to have an effect there.

Your company has called publicly for Government to level the playing field between policies benefiting rail transportation and thus the effects that they have on other modes of transportation. Now, I have long been an advocate of a balanced transportation network, which includes all modes. Among the policies that you have advocated in your testimony, what do you see as being required to level that playing field?

Mr. SIMPSON. The easiest and the least costly and the first thing that could be done would be tax exempt, and take those out from under the State cap for high-speed rail to help high-speed rail in the United States. Airports are built with public funds. They are

outside the cap. Port facilities are built with public funds outside the State cap.

We would like to see rail facilities also built taken outside the cap, especially high-speed rail facilities. We would also like to see you take a look at loan guarantees, and not just for high-speed rail—and you have to distinguish, or we do, the Government does, very high speed rail is 150 miles an hour higher—high-speed rail is something less than that.

We would advocate that there be a generic bill that would benefit Amtrak and others that could use these funds, whether it is loan guarantees—although Amtrak has a problem there because of its quasi-Government relationship—it might have a problem, but others could use that kind of money for that particular activity.

Senator LAUTENBERG. Can we achieve the speed levels, the efficiency, and safety levels in this country that have been developed in other parts of the world, considering differences in gauge, curves in the track, et cetera? Is that something we can do without having to rebuild our entire rail system?

Mr. SIMPSON. In selected areas we can; in other areas we cannot. For example, on the Northeast corridor, there is no way to achieve 200 miles an hour, or 187 miles an hour as they have in France at the present time, on the rights-of-way that we have. Because the curves will not handle that speed. The grade crossings are not all separated. And for that kind of rail you must have grade crossing separations. You must have longer radius curves.

Again, the tilt train is meeting some of that demand, and they will get the speed up on Amtrak and on the Northeast corridor. But for new lines in California, Florida, Texas, other places, corridors already designated—

Senator LAUTENBERG. That new track that has to be laid.

Mr. SIMPSON. That new track, all with grade crossings to prevent cross traffic, we can exceed the speeds that are currently in France.

We also need to have full funding of ISTEA. Intermodalism is extremely important. That must be done. And we know that it is authorized. It needs to be funded for all modes of transportation.

Senator LAUTENBERG. Well, I had a ride recently in the cab of a train that is being demonstrated across the Amtrak system, particularly in the Northeast corridor. And we were whipping along at 151 miles an hour. When you are up in that cab, close to the windshield, it feels different than when you are sitting back in one of the cars. But if we can achieve those kinds of speeds, even with the track bed as it is, that would be enough of an advance to attract a lot of people to rail service.

Mr. Skarzynski, of course we in New Jersey are very proud of the leadership role that AT&T has always had in communication particularly. And I am pleased to know that my efforts on behalf of IVHS offer an opportunity for development and employment and the considerable skills that AT&T brings to a project.

How compatible are your existing technologies with what you see as the IVHS requirements in the future?

Mr. SKARZYNSKI. A number of the different traffic management strategies that DOT and highways are looking at can use a lot of existing technologies. We talk about one, pulling together roadway sensors and information, pulling that back to a traffic operations

center. In that case, you may employ fiber optic communications, which are technologies that exist today, that provide bandwidth, one for the connections of existing sensors and also for the deployment of new sensors, some of the video technologies that we have today. It is a matter of applying those into these situations.

And at the traffic operations center, again, you will see the idea of fusion of data at the centers. And those software skills are again things that we have used in the operations of a communications network. And we see essentially applying it in a similar fashion to traffic management, as well, from that perspective.

Senator LAUTENBERG. So, much of this is off the shelf?

Mr. SKARZYNSKI. Yes.

Senator LAUTENBERG. Much of it is being used in other ways?

Mr. SKARZYNSKI. That is right.

A number of the technologies are off the shelf. There will be development of new technologies to take these strategies farther, but some of the basic infrastructure things that can be done alongside a highway to collect information and data exist today. So those are off-the-shelf technologies.

Senator LAUTENBERG. Was AT&T's decision to get into the field stimulated or encouraged by decisions by the Federal Government to make investments?

Mr. SKARZYNSKI. That was probably one of them. As I said, we have been looking and trying to understand the market and opportunities for AT&T. I think with the ISTEA legislation, right now we are having, I guess, a number of the DOT's and different highway authorities have an enhanced interest. They are gaining better understanding of what technologies can do, to apply in their situations. And I think that is providing us the opportunity to start working with, again, and essentially, for us, a new set of customers from a new vantage point.

So it has definitely been an emphasis to move us along.

Senator LAUTENBERG. So, AT&T sees it as an opportunity for growth?

Mr. SKARZYNSKI. We do.

Senator LAUTENBERG. How about export opportunities in IVHS technology? Is that there?

Mr. SKARZYNSKI. Yes; we see that as well. We are, one, at this point in time trying to get a better understanding from our vantage of what can be done in the United States and in fact locally in some of the places that we operate today. We are right now in discussions with a number of overseas highway authorities for the deployment of some of these technologies that we have today into their environments.

So, most definitely, the work that I think has been started here, we are transferring, at least our knowledge base, into export markets as well.

Senator LAUTENBERG. Mr. Gregg, in your comments you talked about Hughes' conversion from defense to civilian applications. We are delighted to see that. Because a company like yours does have a unique skills base, with the engineers, systems designers, and scientists; and we are pleased that you are trying to employ those skills and that kind of management into those programs and prod-



ucts that will help us move our infrastructure transportation systems.

When a company like Hughes makes a decision to get involved in something like IVHS, how much of that decision is triggered by a Federal commitment to invest in the area?

Mr. GREGG. Mr. Chairman, there were three reasons for us to have this startup. In about 1986, it finally became clear, at least to our part of the defense industry, the will of the Congress regarding defense spending in the longer term. And we began to look around for commercial diversification.

The second thing that happened to us was the acquisition of Hughes by General Motors and their very strong pivotal interest, primary interest, in transportation. And then, as Mr. Skarzynski said, the authorization of ISTEA was, for us, the final driving of the nail in.

We saw that as an opportunity to bring back some of our employment. I work in Fullerton, CA, at our plantsite our employment is 8,000, down from 16,000 in 1985. And so IVHS represents a way for us to build back up in our community and reemploy many of the high-technology workers that we have lost.

So the Federal policy was——

Senator LAUTENBERG. It helps you keep the employment base from shrinking any further.

Mr. GREGG. Correct.

Senator LAUTENBERG. And the opportunity to expand it.

Are you finding that technologies systems and programs that you had developed for defense applicable or usable for transportation applications?

Mr. GREGG. Yes, exactly. And that really was fundamental in our decision to come into the business. We are now taking some of the technologies and developing products that are specifically oriented toward this market.

And there will be some new technologies that are required, but I agree that in general, we are talking about off the shelf, mature technologies from the defense business.

Senator LAUTENBERG. Very good.

Thank you.

We are joined now by our distinguished colleague and friend from another part of the country, from New Mexico, Senator Domenici.

Senator, this is the second panel. I know that you were unable to join us earlier. The first panel had people from State government, labor, and the Highway Contractors' Association proclaiming the virtues of this kind of investment. And we now have been followed on by people from the industrial sector.

We are delighted to see you.

#### STATEMENT OF SENATOR DOMENICI

Senator DOMENICI. Thank you very much, Mr. Chairman.

I do not want to take much time. I have a statement that I want to put in the record. I want to compliment you, Mr. Chairman, for calling this early hearing. While we may not end up agreeing in every respect with reference to the need for economic stimulus, this hearing will provide important information for such a debate. As

we set in perspective what we ought to be doing on the economy and the deficit, it is important that ideas such as these be reflected, and that we look at them and analyze them. And I compliment you for that.

There is no question that there are large groups of Americans and plenty of people in leadership positions that think this kind of investment in infrastructure ought to happen, and we ought to increase spending in this regard.

Frankly, I have slightly different views, as you probably suspect. Nonetheless, I think that we have to look at this issue carefully and evaluate it very well. I think we will be doing that with your hearing. And I thank you for that.

#### PREPARED STATEMENT

Senator LAUTENBERG. I thank you very much. Your full statement will be made part of the record.

[The statement follows:]

#### STATEMENT OF SENATOR DOMENICI

Mr. Chairman, I appreciate the opportunity to offer a few comments for the record. It's been interesting to listen to the public discussions over the past year on the merits of public infrastructure investment. There is widespread agreement among economists that the federal government needs to shift a significant amount of its "consumption" spending to savings and well-chosen "investments" in order to result in long-term growth and productivity. I share that view. I fear, however, that at times we have hoped that public infrastructure investment could be the "silver bullet" which could propel a slow-growing economy back to the high growth rates we enjoyed during the height of the 1980's expansion.

Evidence suggests, however, that we should be cautious in endorsing higher federal infrastructure spending, particularly if it comes at the expense of lowering the deficit. As a means of short-term stimulus, infrastructure spending, with its very slow spendout rate, provides no significant impact during the first 12 to 18 months after enactment. As for long-term productivity gains, Dr. Reischauer, in testimony before the Senate Budget Committee yesterday, referred to analyses by the Congressional Budget Office which indicate that return on public investment in infrastructure on average is lower than the returns to private investment. Only when government investments are based on careful cost-benefit analysis is there a productivity return equal to that of private investment. Unfortunately, political influence has often been dominant in the selection of projects for public investment.

Over the past four years, we have seen a real growth of approximately 30 percent in federal spending for infrastructure programs, including substantial increases in aviation, highways and environmental infrastructure. Given this increased investment and the somewhat diminished need, it becomes even less likely that newly selected infrastructure projects would yield the high rates of return in productivity that might be achieved during a period of low investment.

We can no longer subscribe to an assumption that all infrastructure spending is beneficial to the economy, nor that past spending trends are paramount in determining the appropriate level of investment today.

I have been a strong supporter of infrastructure investment in the past and remain so today. I believe, however, that it makes sense to ensure that we are efficiently utilizing existing infrastructure and targeting our resources based on careful cost-benefit analysis.

The economy is not growing as quickly as it has during previous post-recessionary periods. We have strong indication, however, that this recovery will be self-sustaining, with economic growth projected by CBO to be in the area of 3 percent during 1993 and 1994. I agree with the majority of economists who advocate a reduction in the federal deficit as the single most important factor in ensuring long-term productivity.

Thank you, Mr. Chairman.

## NEED FOR PRUDENT INVESTMENT

Senator LAUTENBERG. Senator Domenici is a longtime member and the senior Republican member of the Budget Committee. And he is very thoughtful. And while we may disagree on a policy here or there, we have an ability to discuss these, I think, in an effective manner.

What I am hoping, Senator, is that by prudent investment, not simply spending, that we can deal with some part of our deficit requirement by getting people back to work by reducing the need for Government programs to help those unemployed, including Medicaid where necessary, and other kinds of social programs, as well as unemployment support. This will help us do it, and that is the purpose.

Thank you very much.

Senator DOMENICI. Mr. Chairman, I might say that I was at a Banking Committee hearing until my arrival here. I would look across and see the members of the Democratic Party present, and I was kind of hopeful that someone with your business experience would have participated. We were discussing the tremendous problem we are having with banks being banks. Something is happening. Banks are holders of Treasury bills, but they are not lending money to business people.

Senator LAUTENBERG. Less risk and a surer return. Of course.

Senator DOMENICI. Obviously, we pushed that practice on the banks. We do not want them to have anything risky. We have put so many rules on banks that, if you and I were chairman or president of one of those boards, and we could buy T-bills instead of lending one-half of a million dollars to John Smith down the street for his tool-and-die company and then be scrutinized by everyone, we would be buying the T-bills and having a party.

But that is not what we chartered banks for. Right?

Senator LAUTENBERG. Absolutely right.

Senator DOMENICI. So I thought that was pretty important, too, because I think that situation means that billions of dollars are not getting into the mainstream and side streets and byways of America for American business.

Senator LAUTENBERG. I cannot tell you how many complaints I get from friends in business, including in the banking business, about the inability of these institutions to do what they are chartered and designated to do. People are screaming for capital opportunities that want to take the chance. It is very tough.

Senator DOMENICI. Incidentally, regulators are still saying they do not know that it is real. I mean, experts are up there saying there are a lot of anecdotes, but we do not have facts yet. So, I do not know how much longer it is going to take us. Even the bankers will not come and testify honestly because they are afraid of the regulators. I do not think you could get average bankers to come in and tell you the whole story publicly about how the regulations are imposing enormously ludicrous kinds of situations on the banks.

Senator LAUTENBERG. A cup of coffee will do it.

Senator DOMENICI. You got it.

Senator LAUTENBERG. Or even a drink, if one is so disposed.

Thank you very much, members of the panel. I am sorry we are running as late as we are, but your testimony was very valuable.

### PANEL THREE

I would now ask Mr. Lamm, Mr. Murphy, and Mr. Silcott to join us.

You are familiar with my request on testimony. Your full testimony will be included in the record as you submit it, and we would ask you for a summary staying within the 5 minute plus rule. And, Mr. Lamm, if you are ready, we invite you to give your testimony.

### HIGHWAY USERS FEDERATION

#### STATEMENT OF LESTER P. LAMM, PRESIDENT

Mr. LAMM. Thank you, Mr. Chairman. Good morning. It is a pleasure for me to be here. I have testified before your committee many times in my 31 years of Government service and 7 years since, but I cannot recall a single hearing that has been more timely and more significant than the one that we are looking at this morning. And I will join the other panelists in complimenting you for your leadership in focusing on these very significant issues.

From the standpoint of the Highway Users Federation—I will be talking a little bit later on my role as president of the Intelligent Vehicle Highway Society of America, but from the standpoint of Highway Users Federation I bring a little different perspective than the previous panelists because our members are really the principal payers of the highway user fees that support both the highway and the transit segments of the highway trust fund.

And our members also are concerned about transportation not basically because of their market being in construction of highway facilities, so much as their market being—requiring a well performing highway system and transportation system. In fact, our members' daily business is carried out more smoothly if the transportation system performs well, and consequently we look at investments in transportation as being a device to improve productivity down the line, and the concept of the long-term investment potential is the most significant thing to us.

Transportation costs do amount to roughly 25 percent of most producer costs, and also total nearly 20 percent of the gross domestic product in this country. Obviously, if we can reduce the problems due to a limited transportation service, we would position U.S. industry better in the future world market.

I will be talking about three issues, transportation productivity, IVHS as a new technology, and the level of financing that several of your previous speakers have referred to. My testimony uses the currently proposed North American Free Trade Agreement as a case study to look at transportation productivity and the relationship to international trade. And I will not go into that in too much detail other than to say that whether or not one favors the North American Free Trade Agreement, it has focused a lot of attention on the role of transportation in moving goods and people across international borders.

And in particular, there is a lot we do not know about the transportation to and from our immediate neighbors to the north and



south. For instance, the patterns of transportation and the different modes that are used west of the Rockies is totally different from the international movements which you experience in New Jersey.

And, again, I think it is all the better for us to devote enough time early to understand what we are talking about and to focus more clearly on what Government activities will do in either improving or not improving transportation performance. And the one thing that stands out if there cannot be one single prescription for transportation until we look at the actual services required.

What I would like to mention too is that one of the elements of transportation productivity that is most significant in the ISTEA legislation of 1991 is that you have authorized the establishment, subject to later congressional confirmation, of a National Highway System. Now that is not one more series of long distance controlled access highways like the Interstate System, but it will be a very significant carrier of main focus transportation demands.

We anticipate that that 4 percent of road mileage will carry about 40 percent of all American travel and about 75 percent of the commercial vehicles that are traveled by the end of the century. And if we are talking about any one road system handling three-quarters of all truck and bus traffic into the future, obviously this system is going to have one highly significant share of an impact on future transportation and productivity growth.

The testimony also gets into the measurement of transportation productivity. That was the subject, as we all remember, of many debates during the ISTEA discussions in 1991, because of a figure which was given to Chairman Moynihan by the Council of Economic Advisors at the time, that U.S. transportation productivity growth is 0.2 percent per year. Well actually, that alarmed a lot of us and we sent people to work with the Bureau of Labor Statistics. And figures that come out, that we have transmitted to the committee, show a much higher figure.

On IVHS, the thing I would like to emphasize there is that the Intelligent Vehicle Highway System community is well represented. You have had three panelist who are members already. IVHS America serves as the main component to pull all of the individual groups together. We are serving as an advisory committee to the Department of Commerce—excuse me, Department of Transportation to look at coordinating Intelligent Vehicle Highway System activities.

Now I think we are right on target. We have submitted a number of products to the Senate already, headed by the long-desired, long-term strategic plan for IVHS activities in the United States. We have also submitted very recently to the Federal Highway Administration recommendations for short-term, fiscal year 1994 and 1995, usage of proposed research, development, and testing funds.

I would be glad to answer further questions on IVHS America, but just before I finish let me mention that we totally support the increased level of transportation funding for highways, highway safety, and transit, which you indicated Monday of this week you would support. In fact, we held a press conference along with 10 other organizations yesterday, specifying that we would support full funding for the ISTEA provisions for fiscal year 1993.

Mr. Chairman, those are three very significant issues. I have just covered them very lightly, but would be very happy to answer in further detail any questions you might have.

#### PREPARED STATEMENT

Senator LAUTENBERG. Pleased to have you here. Thank you very much. Your full statement will be made part of the record.

[The statement follows:]

#### STATEMENT OF LESTER P. LAMM

Mr. Chairman, I am Lester P. Lamm, President of the Highway Users Federation. We are delighted the subcommittee is beginning the 103rd Congress by considering the economic impact of our various federal-aid transportation programs. This is a subject about which our members, the principal payers of state and federal highway user fees, are vitally interested, and I appreciate your invitation to participate in this important hearing.

You asked that I discuss the effect of highway program investments on our economic productivity and our ability to compete in markets here and abroad. Specifically, you are interested in new technologies resulting from highway program investments and the jobs and new markets created by those investments. I welcome your interest, since I believe the prime reason for continued federal attention to transportation is its economic impact. Persons and goods are at point A and the market requires them to be at point B. The resulting trillions of person and freight miles permit the U.S. economy to function. Transportation costs amount to 25 percent or more of producer costs, and total nearly 20 percent of our gross domestic product. Obviously, if we can reduce these figures, or limit their future growth, we position our industry better in the world market.

#### TRANSPORTATION AND INTERNATIONAL TRADE

Rather than discussing the relationship between transportation and trade in the abstract, I'd like to use the proposed North American Free Trade Agreement (NAFTA) as a current case study.

Later this year, Congress is likely to be considering the NAFTA and legislation to implement its provisions. No matter how one feels about the merits of this Agreement, and Senators appear to hold divergent views on that subject, there can be no dispute that any potential economic benefits of reduced trade barriers can only be realized if the means exist to transport goods and people from one country to another. Specifically with respect to NAFTA, do we have the necessary transportation infrastructure in place to make possible the freer and more substantial flow of goods and people across our southern and northern borders?

Fortunately, Congress anticipated this important question by authorizing a study of our border crossings in section 6015 of the ISTEA, and last year, this committee and your House counterparts appropriated \$2.4 million to complete the study. The Federal Highway Administration is pursuing it with vigor and is working in cooperation with western state officials, public interest groups, state and federal leaders in Mexico, provincial officials in Canada, and interested parties in the private sector of all three countries.

Properly done, the border crossing study will provide government officials and, more importantly, private sector investors in all three countries with essential information—currently unavailable, for the most part—concerning likely production sites, existing or potential product distribution centers, likely transportation corridors, and the need for new transportation modes and infrastructure improvements. Given that Canada is our largest trading partner and Mexico the third largest, it is surprising how little statistical data has been gathered and how little analysis has been done that would allow businesses and government officials to determine the most cost-effective means of producing and transporting goods within North America.

For instance, historically most Canada-U.S. trade has been concentrated in the eastern states and provinces, but in recent years, population growth in both countries has been strongest in the Pacific states and provinces and the western mountain regions. This demographic shift means there will be a growing number of production sites, distribution centers, and markets in the West, and federal, state, and provincial transportation officials need to be planning how to accommodate the increased demands on their transportation infrastructure.

To begin with, how are goods now being transported? Dr. Larry Swanson of the University of Montana estimates that 65 percent of the value of goods coming south into the U.S. through Alberta is Canadian crude oil and natural gas and is shipped by pipeline. Another 29 percent by value is shipped by road. Less than 4 percent goes by rail and less than 3 percent by air. On the other hand, western U.S. exports flowing into Canada through Alberta—consisting primarily of manufactured products, electronics, motor vehicles and other transportation equipment—are shipped by highway (65 percent), air (16 percent), and rail (12 percent).

Given demographic trends, the development of significant population centers, and the anticipated increase in trade, Dr. Swanson predicts the emergence of three Canada-U.S. trade corridors in the West: one along the Pacific coast from British Columbia to California; another from Manitoba through North Dakota and Minnesota; and a third running from Edmonton and Calgary in Alberta through the Rocky Mountain states and into the Southwest and the Texas Gulf coast.

This kind of analysis is exactly what transportation officials need to make possible reasoned decisions related to transportation planning and project development. It is also the kind of analysis the border crossing study is designed to support for the benefit of business and transportation decision-makers in all regions of the country.

The availability of adequate information and analysis of our transportation investment needs at both the U.S.-Canada and U.S.-Mexico borders will help determine America's future economic productivity and American business' competitive position in international markets. Transportation costs are an important component of product prices everywhere, but they can easily be a substantially greater share of product prices in North America where population density is dramatically less than that of our principal industrial competitors. Our goods must travel further from production to market.

It is particularly timely to be working on the border crossing study now, not only because NAFTA is on the legislative agenda, but also because the states and the Federal Highway Administration are working on a map of the National Highway System (NHS) to be submitted to Congress by the end of this year. Decisions made this year and next by transportation officials and the Congress with respect to the size of the NHS and the routes to be included on it will affect business decisions and economic productivity for decades. Results of the border crossing study should be considered carefully during the NHS development and approval process. The Highway Users Federation intends to work with this committee and other interested parties to see that this is done.

#### TRANSPORTATION PRODUCTIVITY

As we discuss productivity, Mr. Chairman, let me spend just a few moments on the question of how productivity in the transportation sector of our economy is measured. During debate on the ISTEIA in 1991, Senator Moynihan noted on several occasions that Michael Boskin, then-Chairman of the Council of Economic Advisors, had said in a speech that the average annual growth rate in transportation productivity had dwindled to 0.2 percent.

That is, to borrow Senator Moynihan's phrase, a medieval rate of growth. It raises the question whether our federal-aid transportation programs are having the desired and, indeed, the observed salutary effect on the economy.

We took that concern seriously at the Highway Users Federation and asked Alan Pisarski, a prominent transportation scholar and author, to study the productivity data to determine the accuracy of Dr. Boskin's remark. I have attached the Pisarski report to my written testimony for the subcommittee's review. Let me just quote from his principal finding: "we believe that although the statistics are varying and in need of serious help, none of the data support the very negative connotation of the 0.2 percent growth rate which has been cited. While the nature of the statistics and the structural trends tend to understate true productivity, they cannot support a number less than 1.4 percent."

The other major finding in the Pisarski report is that statistical analysis of productivity in transportation is nearly impossible because we don't have any clear definition of the "product" of transportation. He notes that most analysts use passenger-miles or the ton-miles as the prime measure of "the work done", but this measure is totally insensitive to such important elements of transportation as time, safety, reliability, and control. The common passenger-mile or ton-mile measure tends to equate an oxcart and a jet, since both generate the same passenger-miles in moving someone from Washington to New York.

I raise this issue, primarily to reassure the subcommittee there is every reason to believe our federal-aid transportation programs are an economic benefit and a small but important part of the nation's total annual investment in a very produc-



tive segment of the economy. In addition, I mention the Pisarski study to suggest the very important but complicated work that lies ahead for the recently-established Bureau of Transportation Statistics (BTS). I urge this subcommittee to see that the BTS has sufficient financial resources to become a reliable, accurate source for transportation data.

#### INTELLIGENT VEHICLE HIGHWAY SYSTEM

Let me turn to the research and testing already well underway in the Intelligent Vehicle Highway Systems area. As you know, Mr. Chairman, I serve as unsalaried president of the Intelligent Vehicle Highway Society of America, a public/private sector partnership established to coordinate overall progress in developing IVHS in the U.S. We have been extremely active during the past 13 months in helping the Department of Transportation to implement the IVHS provision of the ISTEA.

That landmark legislation authorized \$660 million in federal assistance for IVHS research and testing. Even prior to that authorization, this subcommittee provided welcome increases in funding for IVHS research, and since ISTEA's enactment, you have done the work required to meet the authorized financial commitment and move this important program forward. The board and members of IVHS America look forward to our continued cooperation with the subcommittee members and staff to build on our early progress.

Obviously, you understand IVHS is more than just a fascinating intellectual challenge for transportation engineers and planners. But exactly what does IVHS mean to America's economy? In a nutshell, it means jobs and marketable technology development today, and it may be vital to our economic productivity and economic growth in the years ahead.

Intelligent Vehicle Highway Systems may come in a variety of forms but all of them use computers, communications, and electronic technology to help solve multiple surface transportation problems. Deployment of IVHS will mean less congestion, improved safety, increased economic efficiency, and a cleaner environment. Studies indicate that by the end of the next decade, deployed IVHS systems can reduce traffic fatalities by 8 percent and traffic congestion by 20 percent.

In its Strategic Plan for Intelligent Vehicle-Highway Systems in the United States, IVHS AMERICA projected a 20-year, \$209 billion program in which 80 percent of the funding comes through private sector investment. A commitment of this magnitude will enable the United States to lead the burgeoning worldwide IVHS development, providing new jobs in the U.S., new electronic technologies, and a ready-made international marketplace.

The private sector's role in IVHS is fundamental. Private companies and consumers will make the largest investment in IVHS, and have the greatest knowledge of product marketability. While IVHS is often thought of as merely a significant business opportunity for auto makers—and every automobile manufacturer, domestic and worldwide, is active in IVHS research and development—the market is not limited to vehicles.

For instance, hand-held devices can provide a variety of traveler information such as bus schedules, directories of business listings, and tourist attractions. The American Automobile Association is already producing traveler information kiosks to be displayed at airports, hotel lobbies, and visitor information centers. A Los Angeles-based company called Pactel TeleTrac uses IVHS technology for fleet management purposes.

Consumers are enthusiastic about the future availability of other IVHS technologies. In Orlando, the year-long TravTek project, which provides in-vehicle navigation and dynamic route guidance in 75 rental Oldsmobiles, is winding down. Preliminary findings show that users were enthusiastic about the technology and its benefits, and look forward to its availability on the market. Asked to rate TravTek on a scale of one (poor) to six (excellent), the average answer from users is 5.1. I had my third opportunity to use a TravTek vehicle just 10 days ago, and it worked flawlessly. Yet, while we deal in small scale projects, in Japan, over 300,000 in-vehicle navigation systems have been sold in high-end vehicles, and every major car company has offered some version of navigation systems as part of their on-board entertainment consoles.

Fulfilling IVHS infrastructure needs will also create a large market. These needs include sensors and actuators, beacons, and hardware and software for electronic toll collection and area-wide traffic management systems. For instance, the FAST-TRAC IVHS operational test, based in Oakland County, Michigan, uses a computer-based traffic signal control system known as SCATS, and Autoscope video image processing system to monitor intersections, and a system of roadside beacons used for dynamic route guidance manufactured by the Siemens Corporation. In fiscal year



1993, FAST-TRAC will equip 95 intersections with SCATS and Autoscope technology, and install 30 of the beacons produced by Siemens. Electronic tolls have already been deployed in many areas, with competitive bidding among several companies to develop and manage the systems. Other IVHS technologies in this area include weigh-in-motion and automatic vehicle identification for long-haul trucking.

The defense buildup has caused companies not usually part of the transportation industry to look to other markets to sell their technology. Firms such as Westinghouse, Hughes, TRW, Raytheon, Rockwell, Harris and Lockheed have all become active members of IVHS AMERICA in the expectation that IVHS will provide a large market for their projects and expertise.

The potential of IVHS will only be realized with continued government infrastructure spending, particularly in the area of Advanced Transportation Management Systems (ATMS). ATMS is a basic building block on which all other IVHS functional areas rely. Near-term ATMS research needs include decisions on communications standards and frequencies, which aspects of IVHS system architecture are nationally significant, and the nature of the data that needs to be gathered by surveillance equipment to optimize system management. Government investment in areas such as these will provide the foundation needed to build private investment.

Participation is required at all levels of government. State and local governments manage traffic and build, operate, and maintain surface transportation systems. They will install, operate, and maintain the IVHS infrastructure, or contract out these functions to the private sector. Therefore, without the participation of state and local governments, IVHS will fail. Carrying out such programs requires extensive federal assistance. The means of such assistance already exists in the form of the Intermodal Surface Transportation Efficiency Act of 1991. A fully-funded ISTEA will help ensure the success of IVHS, continuing to create jobs and products for American workers and companies in the IVHS industry.

#### ADEQUACY OF EXISTING LEVELS OF TRANSPORTATION FUNDING

Finally, Mr. Chairman, you asked for my views on the existing levels of federal investment in transportation. So far the six-year, \$155-billion bill has been underfunded. ISTEA started out with authorizations of roughly \$30 billion earmarked for transit, and \$30 billion reserved for roads and bridges. The rest—\$90 billion or more—is flexible, available for mass transit, commuter rail, magnetic levitation trains, or more traditional road and bridge projects.

A major concern of the private sector has been whether all transportation users could actually count on the anticipated funds, in light of the continuing budget problems. It quickly became clear that we could not. The Act authorized \$18.7 billion for highway programs in fiscal year 1992, but Congress appropriated only \$15.6 billion. The funding level authorized for 1993 was \$20.4 billion, but the appropriations were set at about \$18 billion.

The highway obligation ceiling is only \$15.3 billion, with \$2.7 billion outside the ceiling. Forty-seven states have fewer dollars now than in fiscal year 1992. This has handicapped the attainment of the proposed job benefits of the law and has caused Highway Trust Fund balances to increase to \$21.1 billion by the end of fiscal year 1992.

We urge Congress to provide full funding for highways, transit and safety programs for 1993 and beyond. In recent meetings with members of the Clinton Transition Team, we and others in the surface transportation fraternity have been unanimous in our call for full funding. The buildup of unused taxes is particularly troubling to the taxpayers whom we represent.

I take this opportunity to commend you, Mr. Chairman, for announcing on Monday your intention to introduce a fiscal year 1993 supplemental appropriations bill providing full funding for ISTEA programs. Yesterday, at the National Press Club, I was joined by numerous representatives of transportation organizations at a press conference called to highlight our support for full funding and congratulate Senator Lautenberg on moving ahead expeditiously toward that goal. Organizations supporting yesterday's call for supplemental funding of ISTEA include: American Automobile Association, American Portland Cement Alliance, American Trucking Associations, Inc., Construction Industry Manufacturers Association, Highway Users Federation, National Governors' Association, National Private Truck Council, National Stone Association, Recreational Vehicle Industry Association, and Truck Trailer Manufacturers Association.

Again, thank you for your efforts on behalf of transportation, Mr. Chairman. I appreciate this opportunity to testify.

# A BRIEF REVIEW OF TRANSPORTATION PRODUCTIVITY STATISTICS PREPARED FOR THE HIGHWAY USERS FEDERATION

ALAN E. PISARSKI, TRANSPORTATION CONSULTANT

## OVERVIEW

Reviewing the present transportation productivity statistics is like a walking tour through a zoo with all of our statistical problems, both conceptual and institutional, on exhibit. Given all of the swirling currents of trends and counter-trends pushing and pulling at the statistical picture it is unclear what is being displayed, or what is being learned from any element of the statistical data set. To understand what is happening, or, better said, to at least avoid being badly misled, we need to distinguish the elements of the dominant trends.

Although the data are limited it is clear that, by even these coarse measures, most parts of the transportation system, however defined, are growing in productivity at a reasonable rate. There are a host of factors—some significant, some almost extraneous—that weave through the data affecting the individual statistics, often in counter-intuitive ways. Briefly:

- Some of the modes showing low or negative growth in productivity are undergoing serious adjustments in markets and prices since deregulation. Typical of this situation are the Intercity Bus Carriers and Pipelines.
- Some of the modes show the potential for rapid increases in productivity as a result of the impact of the restructuring brought on by deregulatory changes, such as Aviation and Railroads.
- When output is measured in revenue terms, some modes appear to have slower productivity growth than expected because of the sharp impact of deregulation on prices, such as Railroads, Airlines and Trucking.
- When output is measured in ton-mile or passenger-mile terms, some modes appear to have slower productivity growth than expected, because of recent structural changes in the overall U.S. marketplace, such as Trucking, Railroads, Airlines and Intercity Bus.
- Some modes appear to have slower productivity than expected, when measured in any terms, as a result of congestion caused by an inadequate balance between private sector demand and public sector infrastructure, such as Aviation, Intercity Buses, Transit, and Trucking.

The current statistics are an artifact of: our weak understanding of what the actual product of transportation is; structural changes in the economy affecting transportation; dramatic changes in the industry resulting from deregulation; and historically poor financial support for statistical programs in services in general, and transportation in particular.

In conclusion we believe that although the statistics are varying and in need of serious help, none of the data support the very negative connotation of the 0.2 percent growth rate which has been cited. While the nature of the statistics and the structural trends tend to understate true productivity, they cannot support a number less than 1.4 percent. Statistics based on passenger-miles or ton-miles indicate higher productivity growth levels. With respect to the regulated element of the trucking sector, annual ton-mile based productivity is estimated by BILS data to be about 3.0.

We conclude that it is not the transportation system but the transportation statistical system that is moribund. We hope that this brief analysis will stimulate greater interest in better economic productivity statistics for the vital transportation sector.

## THE TRENDS

What is transportation's product? It should be relatively easy to state unequivocally what the product of transport is. Most analysts use the passenger-mile or the ton-mile as the prime measure of "the work done" or, "the thing accomplished" by transportation activity, with productivity then defined as passenger-miles (or ton-miles) per worker, or per worker hour. Schemes have even been developed to develop equivalences between tons and passengers so that modes that serve both markets, for instance airlines, can express their total joint product in a single measure.

Not too much inspection is required before it is clear that this conception of what transportation does is wholly inadequate. It completely misses the quality component so often difficult to express in services. It tends to equate a ton of diamonds and a ton of coal. But most important it is insensitive to time, and if transportation is about anything it is about time, i.e. the speed-distance relationship. An oxcart and a jet both effectively generate the same passenger-miles in getting someone

from Washington to New York but most of us would not consider the services equivalent. In addition, factors of safety, reliability, and control are critical elements in modern transport and are not expressed in current productivity measures. They are the things that distinguish the various modes and that clients pay for. To not identify them in productivity measures is to count their costs but not their benefits, consequently the statistics would support the belief that transportation is becoming needlessly expensive.

Another way to approach measuring transportation's product is to use the value of the service performed per worker. The weakness with this approach is that the effects of price changes, particularly when moving from a regulated to a deregulated, and highly competitive, market place can seriously distort the picture of what is actually happening. As in miles-based calculations, changes in composition of the market, unless carefully accounted for, can distort freight or passenger measures of productivity.

#### STRUCTURAL CHANGES IN THE ECONOMY

The economy has been undergoing changes with far-reaching impacts on transportation. This is perhaps best typified by the declining trend in ton-miles per unit of GNP. Behind that trend lie a number of patterns with dramatic implications for transportation productivity.

The downsizing and weight reduction of many products, automobiles for one example, almost anything electronic for another, affects the ton-mile measure of transport output although the number of vehicles, the units of cameras, TV's, radios, etc. delivered is the same.

The shift away from bulk commodities toward finished and more valuable products, can make productivity expressed in ton-mile terms appear to be falling, because the more valuable products cannot be shipped in the same mass, bulk fashion.

The demand for more timely arrival for certain products moves them into the higher cost travel modes that can provide speed and control, which can make the overall system seem more costly and less productive, under current definitions of productivity. Any trend toward greater average transport cost per ton mile for the overall economy is primarily a product of the changing value and character of the mix of products that constitute the tons moved.

Increasing fuel efficiencies and changing national petroleum sources are affecting the tonnages moved in our pipeline systems which are relatively inflexible in capacity—Pipeline ton miles have been relatively fixed since 1970 as average lengths of haul declined.

Rising incomes and auto ownership have reduced dependence on low cost mass modes such as intercity bus. Intercity bus industry productivity statistics will appear positive or negative depending on whether the industry can reduce service more rapidly or less rapidly than the decline in demand.

While intercity auto travel has grown throughout the eighties all of the intercity passenger carrier modes have been affected by very limited growth in passengers in the late eighties. Air travel, usually the exception, did grow rapidly early in the eighties but has stagnated since 1986. Growth in passenger miles in the carrier modes has been almost exclusively a product of the increases in average miles per trip.

#### EFFECTS OF DEREGULATION

Deregulation has been a dramatic force for productivity in transportation. The U.S. has a rail and truck system of extremely high productivity, perhaps linked to the historical orientation to travel in the nation and the great distances involved, perhaps due to some good public policies and excellent private sector management. Deregulation has created pressures that foster even greater productivity in those and other modes. The picture varies from mode to mode.

#### RAILROADS

The U.S. Rail industry is the most productive in the world, and the country in second place isn't even close. In the last ten years ton-miles of travel on the railroads increased by about 12 percent, at the same time that miles of track decreased 25 percent, the number of freight cars declined 44 percent, employment by 52 percent, and gallons of fuel consumed declined by 21 percent. Although most of us think of Europe and other areas as being more rail oriented than we, the fact is that we have the highest share of ton-miles on rail of any major developed country including Europe and Japan. Only the USSR and some of the old Soviet Bloc coun-



tries have greater orientation to rail than we do, if you consider them developed countries.

One of the drivers of rail efficiency is that it is dealing with a relatively stagnant market. Rail tonnage shipped annually has been around 1.4 or 1.9 billion tons since 1944. Ton miles have grown, but not dramatically. Since 1980 ton-miles are up about 12 percent reaching 1 trillion ton miles for the first time in 1989. Obviously it was changes in length of haul that caused the increase, from about 610 in 1980 to 720 miles overage length of haul in 1990.

Clearly, by any measure, productivity in the rail industry has improved as a result of the actions taken stemming from greater regulatory freedom to price its services according to the market, and size the system to the realities of demand. One measure, while not seen as a real measure of productivity, but that in reality reflects productivity more than other measures to users of the system, is the revenue received per ton mile. In current dollars this figure has declined from about 2.87 cents in 1980 to 2.67 cents in 1989. In constant dollar terms the reduction has been from 2.87 cents to 1.81 cents. The average rate per ton mile has declined every year since 1982 when it was 3.21 cents per ton mile. While seen as an indicator of rates these revenues are affected by the changing composition of the products moved. As higher valued products left railroads for trucking this would tend to lower average rates.

#### TRUCKING

Trucking productivity data is much harder to obtain but almost all of the evidence points to major productivity improvement in trucking in recent years, although the statistics of productivity might not reflect it.

- One of the facts that stands out is that there were 160,000 fewer large tractors in 1989 than in 1980. All other measures of trucking—tons, ton-miles, revenue—have grown substantially. In fact, truck tonnage rose over 26 percent, and ton-miles 29 percent, as truck tractor registrations declined almost 12 percent.
- The deregulatory changes permitting private and common carriers to fill in empty back-hauls has clearly increased average load factors substantially and reduced wasted miles of travel.
- Increases in permissible sizes and weights of vehicles must have increased the productivity per labor-hour.
- Rate-setting freedom and strong downward pressures on rates due to competition stemming from deregulation may have made revenue per labor-hour trends appear to indicate declining productivity but users saw either constant or declining real rates per ton-mile. The Eno Foundation Index of revenues per ton-mile showed an increase in the Class 1 Truck Index from 100 to 130 while the Producer Price Index went from 100 to 129.1. As in rail, compositional changes can affect this trend, but in trucking they would tend to push it in the higher direction.
- An interesting statistical anomaly may be affecting the productivity statistics of trucking and, to a lesser extent air freight. As just-in-time freight movement grows, apparent trucking productivity may decline in a tradeoff with manufacturing productivity, as firms are willing to pay freight premiums for a smaller truck or a less-than-full truck to optimize their inventory and manufacturing functions. The higher freight costs may obviate the need for larger capital investments in warehouses or other storage areas.

#### TRANSIT

Transit productivity by a number of varying measures has not fared well in the eighties. Passenger miles per operating employee declined from 213,123 passenger miles per employee in 1980 to 151,850 miles per employee in 1989, as passenger miles served grew by small amounts and the number of employees increased. Total transit trips per employee declined by a similar ratio. Vehicle miles per employee dropped from 12,224 vehicle miles per employee to 11,850. Transit systems respond as much to political and social pressures as they do to market forces so that their services will rarely meet economic or productivity tests. Pressures to serve sparse suburban routes, or to maintain uneconomic services where demand has dwindled for example, might explain these negative trends. Changes in the composition of the market was undoubtedly also a factor.

#### PIPELINES

As noted, the pipeline industry has stagnated in the eighties. Total tons shipped grew moderately while average length of haul declined with the result that total ton



miles were almost identical in 1980 and 1989. Shipments of crude declined as shipments of petroleum product grew by roughly an off-setting amount. Revenues were flat as revenue per ton-mile remained constant. When corrected for inflation industry revenue per ton mile declined to about three-quarters of 1980 levels. Total system mileage and total system employees remained relatively unchanged in the period.

#### INTERCITY BUS

Since deregulation the Intercity Bus industry has gone through traumatic changes including a long strike at the industry's major carrier. Compositional changes, primarily in a shift from scheduled to charter services and tour operations, declining markets from changing demographics, auto, air and train competition, and limited data on the 30 major carriers, out of over 3000 tracked by the ICC, make meaningful analysis almost impossible. The trends in existing data show declining productivity but this is a transitional phenomenon that is a product of the rate at which the industry, like transit or other modes lacking growth in demand, can adjust, i.e., reduce, services faster or slower than the decline in demand.

#### AIR

Air travel, while not a part of the surface transportation policy debate, is instructive. The gains in productivity have been significant in the air passenger sector. Even with the flattening of growth since 1986, total passenger-miles grew from 213 billion passenger miles in 1980 to over 335 billion passenger miles in 1990. Responding to this 60 percent growth, employment grew from 453,000 to 692,000, or about 53 percent, thus passenger miles per employee increased moderately. The index of air revenues per passenger mile only grew to 113 in 1989 from the base year of 100 in 1980, while the consumer price index, and Amtrak and Intercity Bus fares grew to over 150. There is some debate on whether the now-predominant hub structure represents a productivity improvement or not.

#### THE DATA

Productivity in transportation is measured variously by the Bureau of Labor Statistics (BLS) as revenue per worker hour or passenger/ton-miles per worker hour. Revenue is in fact the cost of outputs less the cost of inputs, or the value added. Where worker hours are not available total workers is considered a valid substitute. The BLS has been working for many years to construct meaningful statistics of transport productivity with limited data and resources. They are impeded by the difficulties that all services share in measurement of productivity and a few unique to transport.

In unpublished data the BLS identifies the broad productivity of transportation according to the revenue measure as 1.46 percent per year between 1979 and 1988. No further disaggregation of this number into the modal constituents is provided. This statistic is a part of a set that is produced for the overall economy. The summary set is shown below.

#### *Average Annual Growth Rates for Output Per Hour 1979-1988*

Agriculture, forestry and fisheries .....	5.4
Mining .....	1.9
Construction .....	-1.3
Manufacturing .....	3.5
Durables .....	4.0
Nondurables .....	2.6
(Non-goods producing) .....	1.0
Transportation .....	1.4
Communications .....	4.9
Electric, gas, sewers .....	2.7
(Trade) .....	2.2
Wholesale trade .....	2.7
Retail trade .....	1.9
Finance, insurance, and real estate .....	-0.4
Other services .....	-0.4

Unpublished Data Series, Office of Productivity Research, U.S. BLS.

A brief review of this data series indicates that the individual values are surprisingly volatile and can vary enormously from year to year. In manufacturing durables, for example, the total annual productivity gain for the period was 4 percent,

as shown in the table. Productivity in this sector showed almost no growth or negative increase from 1976 to 1982. Total productivity growth for this entire 6 year period amounted to less than one percent. It showed high productivity for a spate from 1983 to 1968 averaging six percent then dropped to 2.3 percent in 1989 and to negative growth of -0.2 percent in 1990.

The transportation component is of course a selected amalgam of all transport elements and reflects only a portion of total transportation activity. The elements included are: Railroad Transportation, Local and Interurban Transit, Trucking and Warehousing, Water Transportation, Transportation by air, Pipelines, Except Gas, and Transportation Services.

Although this list seems rather complete the actual elements are limited by the statistical system's historical ability to treat this subject area, which is primarily a vestigial product of the regulatory era.

For instance, Rail Transport covers the reporting of the 13 Class 1 Carriers. There are no data on the 900 or so smaller carriers. This is not crucial in rail because of the dominance of the Class 1 carriers in the industry, but in trucking and other areas it is less clear.

In trucking this is far more significant in that non-reporting carriers have seen substantial growth and change in the eighties, and most importantly, neither the private trucking sector nor the owner-operator fleet are represented in these statistics. Thus at most about 30 percent of trucking is represented. The inclusion of Warehousing, a vestige of the old Standard Industrial Classification (SIC) process further muddies the water. The Eno Foundation series on Federally regulated freight indicates that the regulated segment now represents about 30 percent of freight movements in contrast to about 55 percent in 1980. The focus, as usual in federal statistics, is on intercity trucking. Urban trucking, which is far more affected by congestion, is only represented tangentially.

Of course, in addition to private trucking being excluded, no other private transportation activities, such as private (corporate) aircraft, watercraft or private or corporate automobiles and buses are represented. Thus the vast majority of intercity passenger travel is excluded as is the 95 percent of intracity passenger travel not carried by public transit.

The BLS also produces detailed productivity statistics for five elements in the transportation sector based on output defined as passenger miles or ton miles. With respect to the covered portion of highway freight, these statistics would show annual trucking productivity during the period to be 3.0 percent. The full set the BLS measures, based on indexes with a base year of 1977 are shown below:

#### INDEX OF OUTPUT PER EMPLOYEE

	1977	1979	1985	1987	1988
Railroad traffic (ton miles) .....	100.0	105.4	156.2	202.6	223.4
Railroad traffic (car miles) .....	100.0	103.5	134.2	164.4	176.9
Intercity trucking .....	100.0	116.7	130.2	138.9	146.2
Intercity trucking (general freight) .....	100.0	116.4	131.7	144.9	156.1
Bus carriers, class 1 .....	100.0	98.6	88.3	94.7	99.8
Air transportation .....	100.0	113.1	136.3	146.1	140.8
Petroleum pipelines .....	100.0	102.5	104.9	104.9	113.7

Productivity measures for selected industries and Government services, U.S. BLS, Feb. 1990, Bulletin 2349.

The BLS continues to work to expand on the available productivity measurement set. They are currently working to expand air and rail reporting and to develop a set of mass transit productivity measures. However, it is clear that the present productivity data set available is very weak and incapable of properly representing the true productivity picture in transportation.

The BLS and the DOT deserve all the support industry can provide to meet these important needs. One valuable by-product of the search for effective representation of the transport productivity picture will be better quantification of the actual "product" of transportation. We do not fully comprehend nor are we able to express, except in very simplistic terms, what is the output of transportation activity. At this stage it is clear that it is the transportation statistical system, not the physical transportation system that is "moribund."

## AAI CORP.

## STATEMENT OF THOMAS V. MURPHY, PRESIDENT AND CHIEF EXECUTIVE OFFICER

Senator LAUTENBERG. Let us now turn to Mr. Murphy from AAI. We welcome you, Mr. Murphy.

Mr. MURPHY. Thank you, Mr. Chairman, and I am very pleased to appear before your committee. I may bring you a unique view today as a president of a medium-sized, technology-based company who is heavily involved in the conversion of our business from predominately defense work to more of a commercial sector.

Our company for the last 40 years has been almost totally dominated by its operations in the defense sector. And about 3 years ago we began to see the need to move ourselves more toward the commercial sector. We are now about at 30 percent of our business in the commercial side, and we are trying to achieve a 50-50 balance by 1995.

We have identified several markets in the commercial sector that our capabilities are well suited for. One of these we feel is the ground transportation area, and we have been moving in that direction now for several years.

One of our focuses is the light rail segment of the ground transportation area. This is both conventional light rail and suspended light rail. One of our active projects is the suspended light rail system technology pilot project which is being sponsored by the ISTEA legislation under the Federal Transit Administration.

We are one of the three competitor teams currently involved in the feasibility study, at the end of which there will be a downselect made of one of these teams to proceed with a pilot project, full engineering development, and prototype operation. We are teamed with the Bay Area Rapid Transit District of San Francisco and the project we are looking at will be the Oakland Airport connector.

Now this program is very important to us because it parallels the kind of development activity that we are very familiar with in the defense community. Here we have a funded engineering development program and then a pilot prototype project. To our knowledge, no other transportation project is being approached in this manner to date, but this is a very important approach for the conversion of industries like ourself.

In addition, we are currently manufacturing the trucks for the Maryland Light Rail System and we have been selected as a subcontractor with Siemens Duewag of Germany in the fabrication of major components of light rail cars in the United States. So we are moving ahead and making progress in this area.

Today, however, I would like to mention a few of what I consider to be the barriers or the difficulties that arise in a company like ours making that conversion, and then hopefully some suggestions of things that you and your committee might lead that would help us in that direction.

First, let me say there is an enormous cultural difference between the defense marketplace and the transportation and infrastructure marketplace. Defense has a well-defined information flow about programs, upcoming procurements, and technology needs. They are assembled uniformly, disseminated to industry through

formal symposiums or reports and so on, so that the marketing aspect of knowing what your customer needs is completely different than in the commercial sector.

The surface transportation marketplace today lacks this central focus and the customers are scattered throughout the country at a State and local level. A number of the institutional and structural problems we have encountered are—in many cases large businesses will dedicate or create new entities to enter this marketplace. Companies of our size would like to be able to mix the commercial and the defense business so that we can take advantage of our existing facilities and organizations.

In the course of pursuing nondefense work, we continue to deal with the full array of the mandated Department of Defense oversight regulations, which do add cost and create restrictions for our moving in the conversion direction. These include some things like cost accounting standards, cost performance reporting, various unallowable costs in overheads, restrictions on our independent research and development, and other oversight functions.

And let me go on to comment on a few of these. When developing a new venture, for example, a commercial company has the discretion to apply its general and administrative expense allocation. For defense companies under cost accounting standards, we must apply our general and administrative expenses equally across to all products.

This encourages a commercial enterprise, under their rules, to pursue business on an incremental contribution to margin basis, and therefore they can add to their business volume. Cost accounting standards required for defense contractors will not permit this practice, and therefore we have an additional cost burden.

Another case, commercial business includes the cost of financing its business into its product and passes that cost on to its customer. Interest and even all costs associated with arranging financing are unallowed for defense contractors, and therefore must come out of profit. Many companies will not merge their DOD and commercial operations because the commercial operations cannot afford the added cost due to this oversight.

I guess if I were to add all of these up and say what could be done to benefit a company like ours, it would be to help us get reduction or lessening of this Government oversight, and particularly in cost accounting and the financial areas.

We also need to encourage and stimulate research and development in various facets of transportation, including light rail. R&D should be employed for dual-use ventures, and we would greatly support a centralized defense—or a centralized research center like the Defense Applied Research Projects Agency [DARPA] has been over the years for the defense industry.

In addition, entry into public transportation requires some major up front capital for facilities tooling and employee training and initial inventory build, and this is a severe barrier for countries like ours—companies like ours, and we would hope that Congress could designate some fund whereby companies like ours could obtain grants or low-interest loans or tax relief for seeking opportunities of this kind in transportation.



In respect to your time, let me wind up quickly. I think there is a great social and economic value for our Nation to include the existing assets now resident in defense business organizations and apply them—transition them into the commercial sector. With support from committees like this and the Government, we believe we could make that conversion.

The alternative of disrupting our existing business through closings and repositioning of people does immeasurable harm, I believe, across the board. Hopefully this can be avoided, and I would also hope that in the future your hearings would continue to include companies of the medium and small size so that you can hear this side of the industry.

Thank you very much.

#### PREPARED STATEMENT

Senator LAUTENBERG. Thank you very much. You bring up an important point. And everybody, no matter how deep the interest, does not have the same capacity to take some of the risks, but yet have the talent and the ability to participate, and we will talk about that in a minute. Your full statement will be inserted in the record.

[The statement follows:]

#### STATEMENT OF THOMAS V. MURPHY

Mr. Chairman and members of the subcommittee. I appreciate the opportunity to appear before you today and share with you our views on this important challenge that is faced by many companies like ours.

#### AAI CORPORATION—HISTORICALLY A DEFENSE ORIENTED COMPANY

I am Tom Murphy, the President and Chief Executive Officer of AAI Corporation. We are a wholly-owned subsidiary of United Industrial Corporation which is listed on the New York Stock Exchange and is among the top 100 defense contractors. AAI Corporation is a medium-size company with a broad range of technologies specializing in engineering, product development and manufacturing. The company was founded in 1950 in Baltimore, Maryland, and today we have 2,200 employees at several sites including Baltimore, Orlando, Binghamton, New York and Orange County, California. About half of our total staff are engineering and technical disciplines of various types. Since its founding, AAI has been predominately involved in defense related activities. In 1985 the company's business was about 99 percent related to defense projects. In 1989 we had begun to move away from this total dependence on defense and had about 10 percent of our activities in non-defense businesses. Today we are in the 30 percent to 35 percent region and we plan by 1995 to have about 50 percent of our business non-defense.

We intend to continue to pursue selected aspects of the defense market. We believe we have much of our expertise rooted in this area and plan to continue as long as meaningful and profitable opportunities exist. However, we do not see much growth in that side of our business, and if we are going to remain viable and grow beyond our current size, we see that strategically we must seek other non-defense market opportunities. We have established our strategic objectives in six areas of business. Our principal area of business is training systems and services followed by test equipment of various kinds, mechanical systems, unmanned systems including the Pioneer unmanned aerial reconnaissance system used successfully in Desert Storm, weather systems, and transportation Systems.

#### TRANSITIONING TO NON-DEFENSE MARKETS

Having already described the mission and composition of AAI, I turn to the process of our transition from almost total dependency on the Department of Defense to the goal of 50 percent non-Defense by 1995.

AAI identified non-defense markets and attempted to match these with growth areas in the Federal budget. Through this process AAI entered commercial aviation

with both flight simulators and hydraulic test equipment. Fire fighter trainers and automated weather observing systems are other successful commercial products that have been developed in the last several years. Surface transportation was also marked as a good fit with our expertise with the promise of significant long term growth.

AAI, as a developer and manufacturer of combat vehicles, military transport trailers, and large mechanical structures has skills that are readily transferable to transportation programs. These range from research and development, to the designing and building of prototypes, to the manufacturing of production units. Light rail is where AAI is now concentrating. This includes both conventional light rail programs and suspended light rail transit (SLRT) systems.

The Federal Transit Administration (FTA) is sponsoring the Suspended Light Rail System Technology Pilot Project under the ISTEA legislation. AAI is one of three competitors teamed with municipal transit authorities in the Feasibility Study phase of this program. With our partner, the Bay Area Rapid Transit District (BARTD), we will develop the Oakland Airport Connector Project. The SLRT program is constructed in a manner similar to ones we are familiar with in the Department of Defense. The Feasibility Study is a competition with a down select to one successful bidder to proceed to Engineering Development and then construction of the Pilot Project. This type of program is more exception than the rule in transportation. To our knowledge, no transportation project has been approached in this manner to date.

In a more conventional program, AAI was the successful bidder to manufacture the trucks (the chassis of the rail cars which includes the wheels, brakes, and motors) for the Maryland Light Rail system. This was done under subcontract to ABB of Sweden since we had no AAI licensed designs. We have recently reached an agreement with Siemens Duewag of Germany to fabricate major components of light rail cars in the U.S. Transit authorities require extensive testing and use data and development of new systems is time consuming and expensive. The short range game plan to begin our transition is to do so using foreign licenses. As we proceed it will become more feasible to commit the necessary funds for research and development.

#### ISSUES ENCOUNTERED IN TRANSITION

Today, I would like to address some of the issues that we see confronting companies like ours that act as barriers to conversion and deterrents to a strong entry into the transportation market. I also have some thoughts on what actions the federal government might take to promote and assist the entry of defense related companies into transportation.

During the course of pursuing light rail programs, we have learned many valuable lessons. There is an enormous cultural difference between the defense marketplace and the transportation and infrastructure marketplace. Defense has well defined information about programs, upcoming procurements, and technological needs that are assembled uniformly and disseminated to industry in a variety of ways such as published reports and government sponsored formal symposiums. Although the defense marketplace on the whole is declining in size, it remains attractive because it is characterized by a level of consistency and predictability enabling companies to plan ahead. In contrast, the surface transportation marketplace lacks a central focus with customers scattered throughout the country at the state and local level. There is limited perceptible central coordination, and it is very difficult for companies to plan strategically on a long-term basis. Even though we understand the need for local control and the inherent special circumstances that are applied, this diversity of needs provides little emphasis on funding private sector research and development for new transportation technology. We welcome Secretary of Transportation Peña's recognition of new transportation ideas and his perception that "This nation ought to be about new technology." In addition to maglev and high speed rail, suspended light rail development could result in new applications of mass transit.

A number of institutional and structural problems have also been encountered. It would be most efficient to expand our existing company rather than create new entities in separate facilities to conduct transportation business. However, in the course of pursuing non-defense work, we continue to deal with the full array of mandated Department of Defense oversight. These incursions include some provisions of the Cost Accounting Standards (CAS), Cost/Performance reporting, various unallowable costs, Independent Research and Development (IR&D) restrictions, and specific oversight of various functions.

While attempting to refrain from too much detail, I will comment on the above issues. When developing a new venture, a commercial company has discretion in

General and Administrative (G&A) expense allocation. G&A may be applied to programs that can afford and cover it, instead of an equal percentage allocation to all products. This encourages the commercial enterprise to pursue business on an incremental contribution to margin basis, thereby adding business volume. The CAS required system for defense contractors will not permit this practice.

Most defense contractors must have a Cost Schedule Control System (CSCS) cost/performance reporting system that requires work and cost tracking with a high level of detail. Commercial business would employ a standard job order or process cost system that is much less expensive to operate and maintain.

A commercial business includes the cost of financing its business into the product and is paid by the customer. While DOD provides progress payments (typically 80 percent to 85 percent), they do not cover the contractor's costs as incurred. Interest and even all costs associated with arranging financing are unallowable and must come out of the contractor's profit.

Government oversight of functions other than accounting and finance also add costs to the contractor. Examples include Purchasing, Management Information Systems, Materials Management Accounting Systems, labor audits, and quality systems reviews. Many companies won't merge their DOD and commercial operations because the commercial operation cannot afford the cost of government oversight to be included in their competitive pricing. The result is duplication of organizations and additional costs.

#### RECOMMENDATIONS TO ENCOURAGE DEFENSE—TRANSPORTATION TRANSITION

I have highlighted some of the more significant barriers that we have encountered and now wish to offer some recommendations. The Congress, the Department of Transportation, and the Department of Defense can do much to facilitate defense conversion.

Of the hurdles mentioned above, most could be resolved with the summary caption "less government oversight". This includes warranted changes to the CAS, relaxation of CSCS requirements for businesses that have more than 40 percent commercial business, and a general reduction in oversight of the overall operation. We would also recommend increased progress payments and permit interest and financing costs to be allowable.

Further, much can be done to encourage and stimulate research and development in various facets of transportation including light rail and other innovative transportation technologies. IR&D should be employed to go forward with dual-use ventures. We must continue to invest in research and development through civilian models of the Defense Applied Research Projects Agency (DARPA). The research and development tax credit should be made either long-term or permanent and the incremental limitation applying only to companies which increase their level of research and development spending should be removed. An investment tax credit should be enacted along with accelerated depreciation for innovative technologies in the transportation and infrastructure field, and measures should be installed to ease access to private and public financing. Congress could create a special incentive in the form of a direct payment or tax credit when a contractor can demonstrate that it took a very specific defense oriented R&D effort or technology and converted it to a commercial application.

Entry into the public transportation market requires major upfront capital for facilities, tools, employee training, and initial inventory build. This is a severe barrier to entry for defense related companies. In order to create quality jobs and grow the U.S. technological and industrial base, Congress could designate a fund whereby companies such as ours could obtain grants, low interest loans, or tax relief for opportunities in transportation. A model of this concept was used by EPA for construction grants for waste water treatment plants. Complimenting this approach, we would welcome creation of more technology demonstration programs. As we and other businesses move forward with defense conversion efforts, there will be a continuing and increasing need for predictably funded research and development.

There are other areas that the Congress and the Department of Transportation should address as well, such as data rights and support for exports. Companies who make large investments in people, time and resources to develop new transportation technologies need to protect their intellectual property and know-how. As we search for research and development funding with a view to being an established supplier of a commercial product, we would ask that the Congress and the Department of Transportation adopt measures that preserve our ownership rights and not require us to sacrifice our rights in technical data in order to obtain research and development funding.



With respect to exports, we believe there will be a large international marketplace for new transportation technologies such as the suspended light rail system. As in the case with defense products and dual-use products (defense and commercial), an export driven international trade policy for transportation and infrastructure products is a vital element to ensure a stable national industrial base.

Specifically, we were pleased to see the Department of Defense eliminate recoupment fees on all products other than foreign military sales of major defense equipment. We would like to see all recoupment eliminated and not attempt to extend recoupment to the non-defense agencies. Further, the Congress can assist American companies by working actively to eliminate trade inequities such as offset requirements, restrictions on foreign sales by U.S. contractors, and subsidization of foreign domestic industries by their respective countries. The U.S. government must actively work toward assuring that the playing field is level in all markets, especially those of our NATO and other mutual treaty partners.

We believe there is greater social and economic value for our nation in allowing the existing intellectual assets now resident in defense business organizations to transition naturally into the commercial sector. With proper support from the government, firms like ours can efficiently focus on technological solutions that will support the growth of new and existing commercial markets.

The alternatives of disruptive closings and the repositioning of people and other resources does immeasurable harm. With creative and thoughtful consideration, we can avoid this undesired course.

I have covered a variety of issues today. Some may be simple to resolve, while others may be much more difficult. AAI is committed to successful entry into surface transportation. To facilitate development of an effective transition path, the Congress should assure industry participation in formulating plans of action. AAI would be pleased to assist these efforts if desired.

On behalf of the AAI Corporation, I thank you for this opportunity to testify.

#### WESTINGHOUSE ELECTRIC CORP.

#### STATEMENT OF ED SILCOTT, VICE PRESIDENT AND GENERAL MANAGER, COMMERCIAL SYSTEMS DIVISION

Senator LAUTENBERG. Mr. Silcott, we invite you to give your testimony and welcome you here.

Mr. SILCOTT. Mr. Chairman, I am not sure I can be interesting. Having listened to AAI and Hughes and AT&T, most of my opening remarks have been given, but I will do my best. It is a pleasure to be here. If I can accomplish anything today, it would be to stimulate you to continue to take such an aggressive position to bring this issue—or maybe create a national imperative for an infrastructure improvement program.

I would like to thank you for a second reason. Having been a CEO, you will appreciate the fact that my role in Westinghouse is to create a commercial entity from a defense operation. And I am the one who has convinced our chairman and CEO that being in the infrastructure business is going to be big business, so I am happy to go back and be able to tell them, sir, that you are committed to help us implement that strategy.

I think the points to be made on the national infrastructure are that our infrastructure needs to be made safer. It is not a safe infrastructure. It is replete with accidents, as we read about nearly daily in the press. But more recently, it also is a haven for a lot of crime that is committed, and all of our infrastructure activities. The national infrastructure needs to be more desirable to use. If you have used the mass transit systems in this country, or if you have to depend upon that to go to work every day, you will find that it is not a very desirable infrastructure. I believe our infrastructure needs to be more compatible with the environment. And last, I think the infrastructure needs to contribute to our competi-



tiveness, not be a productivity drain or drag as Senator Harkin alluded to in his comments.

Westinghouse's technology, as is Hughes and AT&T's and AAI's, is available and can readily be applied to issues of this nature in the infrastructure. Our interest in the infrastructure, of course, is not in the mortar and brick and building aspects of it but in the intelligent systems that can be added to the infrastructure that would have a significant bearing on these types of issues.

Just some perspective on Westinghouse, for the last 50 years we've been engaged in national security. Westinghouse Electronic Systems Group, a \$3 billion a year entity, has a number of successes in providing electronic systems, the whole command and control, communications, and intelligence infrastructure for the military. But since 1990, we have reduced our manpower and engineering capacity from some 23,000 people that existed in 1990 to 14,000 people in 1993, with another 500 layoffs taking place this week alone within our operation.

We have been successful in making an evolution toward nondefense type work, but certainly not at the pace of the reduction in the procurement side of the defense budget would allow us to do. Our initial evolution began in the air traffic control area, where we transitioned military ground radar systems into air traffic control radar systems, and have been very successful with that providing the terminal and en route radars for the FAA as well as the MODES radar.

We are the No. 1 sensor producer to the FAA and recently have been successful in exploiting those fielded technologies with the FAA and the international marketplace. I might add, beating the French and the Italians and the Germans and the Japanese with our superior technology and supportability, which we do well in this country. We have recently won India, air traffic control in India, and Morocco and Tunisia and Panama and Taiwan, and hopefully, we are about to receive the order in Belgium, in the backyard of France.

So we can export our technology once we have had a successful infrastructure improvement transition within this country.

The second evolution we have been successful in is we have applied ourselves to law enforcement. We have been involved in more drug interdictions than any other corporation in America, well over 3,000. We have applied not only radar technology, optical imaging technology, but also the development of biosensors, a new technology for the detection of drugs in a variety of very complex methods that are used to bring drugs into this country.

More recently, we are involved in providing situational awareness for officers in squad cars. We were motivated to do that when a trooper was killed on the Maryland interstate system. He thought he was stopping somebody for a traffic ticket only to find out these were drug dealers in a stolen car heavily armed, and killed the officer when he thought he was in a routine traffic situation. Our sensors embedded in that automobile which is now in beta test in Anne Arundel County and several other counties in this country are proving to be a very valuable technology for officer safety and also officer efficiency.

More recently, we have become committed to the transportation management area beyond air traffic control and those areas like the intelligent highway systems. I will not enumerate all the technologies. They are very similar to what you heard from AT&T and the Hughes, but the point is they are readily available. They simply have to be packaged to meet the requirements of those applications.

The other area that we are involved in is in the electrical vehicle, where we are a designer of the propulsion system under consortium with Chrysler, the State of Maryland, Baltimore Gas & Electric, to provide a solution, a practical solution, for the propulsion of electrical vehicles, which we believe politically has tremendous benefit not only in terms of the environment but less dependency on oil. And it, too, is a practical technology in that we now can meet the speed requirements, the acceleration requirements, and need only evolve the battery technology so that we have the duration on the highway that the consumer wants.

What we would like to see with respect to supporting a conversion effort like ours in Westinghouse is funding. If we were able to receive more funding on the ASR-9 program, which we have not exercised the 11 options on that program, we can continue to be successful internationally. If that funding is not forthcoming that production line will stop in March of this year.

So funding is the issue, sir, not technology or corporate commitment.

I thank you for the opportunity to make this statement.

#### PREPARED STATEMENT

Senator LAUTENBERG. Thank you very much. Your full statement will be inserted in the record.

[The statement follows:]

#### STATEMENT OF EDWARD N. SILCOTT

Good morning. Chairman Lautenberg, and distinguished members of the subcommittee: Thank you for the opportunity to appear before you this morning. I am Ed Silcott, vice president and general manager of Westinghouse's Commercial Systems Divisions in Baltimore, Maryland.

Transportation issues. That is what we are here to talk about today. Mr. Chairman, I would like to briefly outline some of the challenges facing our Nation in this area.

For example, commercial air transport aircraft production is continuing and the number of aircraft is expected to double by the year 2010. Public demand for air transport is increasing and the U.S. air traffic control (ATC) system is approaching its present capacity. Transoceanic air traffic is expected to undergo an even greater growth rate, increasing four-fold by the year 2020.

U.S. commercial aircraft manufacturers now have only 57 percent of the total world market and their market share is eroding rapidly. Foreign aircraft makers who currently do business at considerable financial advantage, through their governments' subsidies, are quickly gaining market share and severely threatening the very existence of aircraft producers in the United States.

Bringing the focus back down to earth, on our interstate highways, 60 percent of drivers average fewer than 35 miles per hour. And speeds will drop even lower as more cars clog the roadways. The problem of traffic congestion is estimated to cost our Nation \$100 billion per year in lost productivity alone.

The automotive industry faces several challenges that impact the entire Nation. First, auto emissions are polluting our cities beyond maximum allowable levels. Local emission programs can only reduce a fraction of vehicle exhaust and do not compensate for the expanding number of automobiles. Second, more than half of our oil is imported. Sixty percent of this oil is used to fuel autos and light trucks whose

internal combustion engines are only 25 percent efficient. This inefficient use of oil, when compounded by our energy dependency, burdens our trade deficit. Third, the global competitiveness of the U.S. auto industry has slipped steadily over the last 20 years. The Europeans and Japanese have captured large portions of our national market. U.S. automobiles are perceived to be lower quality than our foreign competitors. While the industry has made great strides in this area, we have not recaptured lost sales.

Mr. Chairman, as you can see, I have pointed out just a couple examples of the challenges that face our Nation, our new administration, the Congress, and industry in the broad area of transportation. The reason I have selected the above items is because we, at Westinghouse, have begun to find solutions to them. And please, let me add that the timing for this discussion by the subcommittee could not be better than now, as our country strives to meet our transportation and infrastructure needs. And, find ways to diversify the technologies and industrial assets once focused solely on the national defense.

Fortunately, I am able to tell you about some real success stories today, in both the search for solutions and the ability to diversify. At Westinghouse, we began to work on the challenges of diversifying defense technologies into non-defense business areas more than five years ago. In our plan for future growth, we targeted five areas for diversification. These are law enforcement, public safety and security, information management, airspace management, and transportation management. We chose these areas of opportunity for several reasons. First, they involve advanced electronics technology. Second, we have a long heritage devoted to helping our customers meet challenges in such areas as threats, national security, and command, control, and communications. And, third, we have a highly skilled and motivated work force, and many of the appropriate and necessary advanced technology facilities to apply to such challenges.

The result of our diversification has been nothing short of success so far, and the future is full of bright and exciting promises. For example, from a strictly business point of view, we were able to achieve a level of \$1 billion in orders for our new products and systems in 1992. In addition, we are creating new opportunities for our work force that includes some of the more highly talented and skilled employees in America.

Our diversification from primarily defense businesses began with our entrance into air traffic control, a natural for us. I say it is a natural because we at Westinghouse have more than a 50 year history in the radar business which is, as you know, a major component of air traffic control. In fact, our radars have been in service in the United States since just before World War II when we fielded one of our first ground-based radars on the island of Hawaii. One of these early systems actually detected the air strike against Pearl Harbor on December 7, 1941.

We have been intimately immersed in U.S. civil air traffic control for much of the past decade and, in fact, we are now providing the airport surveillance radar the FAA has chosen to control air traffic at most of the major airports in this country.

However, our diversification has gone well beyond helping to provide safer skies for American travelers—and indeed for air travelers in many other parts of the world. For instance, we are currently improving the efficiency and utilization of existing mass transit assets, or city bus systems, with command, control, and communications techniques.

However, mass transportation is not our only concern. We are deeply involved in helping to make transportation for individuals more efficient, cost-effective, and better for our environment, too. For instance, we have developed an advanced power train for the electric vehicle. This development led to our participation in what has come to be called the Chesapeake Consortium, which includes Westinghouse, Chrysler Corporation, Baltimore Gas and Electric, and the State of Maryland. This group was formed to accelerate the commercialization of power trains making travel by electric vehicle feasible and affordable for the driving public.

Westinghouse, with its advanced technology and experience, is ideally suited to pursue the many initiatives in transportation in our country and around the world. We have made a strategic investment in transportation. We have the core competencies to contribute effective solutions to the challenges that face us in transportation. We can help improve convenience and access. We can help increase safety. We can help improve the environment. And, we can go a long way in helping improve efficiency.

The technology to accomplish all of this exists today. But there is a problem in making the technology available to all of those who use transportation which includes just about every citizen in this country. The problem is sufficient funding at the State and Federal levels. The opportunity exists for the U.S. to create a new national transportation image, one that features higher technology, space efficiency,



and environmentally sound transportation. We, in industry, need seed funding to exploit these opportunities for our Nation's future.

Mr. Chairman, and members of this distinguished subcommittee, one of the reasons we are testifying before you today is to offer answers to the question, how can government help? My answer to you is by providing this critical funding support. Keep current high value product lines open, such as air traffic control radars and systems. In addition, fund new product opportunities in transportation, such as new technologies in airspace management, electric and alternate fuel vehicles, efficiency improvements to our infrastructure, and security and enforcement improvements.

In addition, please help those of us in American industry have a level playing field internationally. As you know, private U.S. firms must compete in the global marketplace against foreign government-subsidized industries. This, of course, places us at a disadvantage, and very often a severe disadvantage. I will speak for my company, Westinghouse, and say that when we pursue such international business, we play fairly. We abide by the rules and laws of our country and those in which we attempt to do business. And the truth is we have been successful in our quest for global market share in a variety of industries—in air traffic control and airspace management, for example. But the question is how long will we be able to sustain such success? We need your help in ensuring that we do.

In summary, there are many challenges facing our country in the overall area of transportation. There is a great need for high technology, aerospace-type industries to diversify from providing mainly for the national defense to helping meet these challenges. Companies such as Westinghouse are striving to diversify and find new opportunities for business growth so that we can maintain our technology base and skilled work force.

Each company will tackle those opportunities which involve its core competencies and to which they can contribute the most in terms of technology and expertise. But we need help. We need support from our government at all levels in terms of establishing an overall vision, setting objectives, providing funding, and lending support that will enable us to compete here at home and globally. We, in American industry, stand ready to do our part to diversify and meet the challenges that face us, such as those in transportation, and we have faith that our government will do its part, too.

To further assist this committee, I have attached four separate enclosures that provide additional information regarding the diversification of which I have spoken.

Mr. Chairman, this concludes my opening statement. I request that my full statement be inserted in the record. I am prepared to answer any questions you may have.

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## TRANSPORTATION

### NATION'S PROBLEM

On U.S. interstate highways, 60 percent of the drivers average less than 35 miles/hour. Speeds will drop even lower as more cars clog the roadways. Traffic congestion is estimated to cost the nation \$100 billion per year in lost productivity. Overcrowded expressways also mean more accidents. Fatalities and injuries result in \$70 billion in lost wages and direct costs each year. In addition, transportation has a significant effect on the environment. Almost one-half of the nation lives in areas exceeding smog standards and one-third exceeding carbon-monoxide standards.

#### *How could the Defense Industry contribute to solving the problem?*

Technology developed by the defense industry for military purposes can be applied to this problem as well as economic recovery by advancing: Transportation infrastructure improvements; and Creating greater U.S. competitiveness.

The defense industry has extensive knowledge and experience in the areas of computers, communications, navigation, systems engineering, and information management that will provide solutions to traffic congestion problems, improve highway safety, and reduce the harm that traffic does to the environment. These technologies can be employed on the Intelligent Vehicle Highway System (IVHS) program.

### PROGRAM

Intelligent Vehicle Highway System technology can be used to upgrade existing infrastructure and to make the most efficient use of new infrastructure.

The various sensor, tracking, electronic reader, information and data system technologies developed for military command, control and intelligence purposes can



greatly improve vehicle traffic management, furthering the goals of reduced congestion, clean air, increased efficiency and productivity and safety.

While this effort has begun through the implementation of the intermodal Surface Transportation Efficiency Act (ISTEA) we would propose that it be accelerated, emphasized and that finding be increased.

To encourage states and municipalities to take advantage of advanced IVHS technologies we propose there be incentives for using regular federal highway and transit funds to augment IVHS funds, as well as to incorporate IVHS technologies into federal aid highway, bridge and transit projects. One possible incentive would be a reduced matching share for IVHS projects.

Eligible projects could include: Automated Vehicle Location/Computer Aided Dispatch tracking systems; Electronic toll readers; Electronic information systems; Traveler Information Systems; Traffic Operations—Control Centers; Automated Vehicle Guidance Systems; Anti-Collision Radar; and Magnetic Levitation.

IVHS technologies can improve every aspect of passenger and cargo movement by providing real time and place information on routes, transit alternatives, emergency situations and freight shipments.

#### FUNDING

To achieve this we would recommend a 5 year \$1 billion program, funded at \$200 million per year in each of fiscal years 1993–1997. These funds would be in addition to those already authorized in the ISTEA. This program could be part of the Rebuild America Fund. Several thousand jobs would be created, in addition to a global market for the export of this technology.

#### *What Should The Government Do?*

In the early years of the program special emphasis should be given to operational test programs to facilitate full deployment of these systems by 1996.

The sooner these systems, which have been successfully used for military purposes, are introduced into the civilian transportation sector, the sooner the benefits that they bring to the economy, the infrastructure and to transportation efficiency will be realized.

#### *What Will This Do For the Defense Industry?*

The Defense Industry possesses many of the key technical elements necessary to deploy an IVHS based infrastructure. A primary strength of this industry is its ability to integrate complex projects using state-of-the-art hardware and software technologies. In addition, by applying the Defense Industry strengths to this effort a re-deployment of existing human resources can occur without major costs of retraining. These resources represent a national asset in the engineering, software and systems area.

#### *What Will This Do For the Nation?*

For many of these technologies, e.g. GPS tracking systems, the U.S. is the world leader. In fact, these are prime examples of the "Peace Dividend," major projects funded by D.O.D. and now available for civilian use.

We would propose that the promotion of these U.S. technologies and products to other nations be a key element of the Clinton Administration's trade policy.

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#### ADVANCED COMMERCIAL AVIONICS

#### *What Is The Nation's Problem?*

U.S. commercial aircraft manufacturers now have only 57 percent of the total world market, and their market share is eroding rapidly. Foreign aircraft makers who presently do business at considerable financial advantage through their governments' subsidies are quickly gaining market share and severely threatening the very existence of U.S. aircraft producers—an area vitally important to the U.S. economically and technologically. Advanced integrated aircraft avionics are needed to increase safety while reducing size, weight, and operating costs. These items will also provide a competitive advantage to U.S. aircraft producers to reverse the trend of their loss of market share and revitalize decreasing employment levels.

Also, adverse weather conditions cause hazards to the safety of the flying public, inefficiencies and disruptions to the U.S. ATC system, as well as significant operating cost increases and financial damage to the airlines due to flight delays, diversions, and cancellations. By one analysis, weather events are estimated to cost U.S. airlines up to \$400 million per year in incurred operating costs. Low altitude wind shear is a serious aviation hazard and has caused nearly half of the U.S. airline

fatalities since 1965. As more people and aircraft fly, the chances for encountering these hazardous events will increase.

#### *How Could The Defense Industry Contribute To Solving Problem?*

Many organizations in the defense electronics industry could leverage the advanced avionics and cockpit technology that they are providing for national defense. Examples are military systems that span the electromagnetic frequency spectrum and include airborne radars, electro-optical/infrared surveillance systems, laser radar, and data fusion to cite a few.

Defense systems' ability for surveillance, detection, and information processing of objects of military interest on the ground or in the air and "seeing through" adverse weather should be applied to performing similar functions for commercial air transports to solve today's problems.

#### *Program Description and Outline*

Structure a program to develop, test, and lead to procurement of advanced avionics systems to meet the requirements and provide benefits discussed above. Funding: fiscal year 1993, \$100,000; fiscal year 1994, \$175,000, fiscal year 1995, \$175,000; fiscal year 1996, \$150,000; and fiscal year 1997, \$125,000.

#### *What The Government Should Do*

Legislation should be enacted and funding appropriated to industry under Department of Transportation (Federal Aviation Administration) cognizance. A government/industry group should be created to determine requirements, establish standards, and monitor procurement and installation of the avionics systems.

#### *What the Program Will Do For The Defense Industry*

Implementation of the program will capitalize on the U.S. government's investment in avionics technology and will transition the technology to the commercial sector to provide performance and safety benefits not previously viable or available to the air transport industry and U.S. public.

The program could preserve about 8,000 jobs and allow highly skilled employees to serve the general public as well as supporting our personnel in uniform and defense of the Nation. Production of these advanced commercial avionics would result in approximately \$1 billion of revenue through the year 2010 and facilitate defense transition, increased competition, and strengthening of the commercial air transport marketplace.

#### *What The Program Will Do For The Nation*

The program will play a crucial part in strengthening the U.S. air transport industry economic status and competitiveness abroad. U.S. aircraft manufacturers will be able to offer aircraft to world airlines that provide an economic, safety, and performance advantage over foreign aircraft makers.

U.S. airlines, who are now ailing economically, will be able to save hundreds of millions of dollars per year through reduced fuel consumption, delays, and weather impacts—as well as offering safety improvements to the flying public.

U.S. electronics manufacturers will be able to apply dual-use advanced technology to maintain and expand employment levels and market share. Job availability and security for all organizations involved in the industry would be strengthened greatly. Commercial air transport and aerospace is one of America's largest economic and commerce sectors. It provides a substantial number of high paying skilled jobs—presently accounting for about 1,240,000 jobs for aircraft and electronics producers, and airlines operations and maintenance personnel—or roughly 10 percent of the national labor force.

The technology is available to realize the capabilities summarized in this reinvestment proposal. The technology needs to be tailored, refined, and designed to develop an optimum solution. However, the aircraft producers and airlines presently lack the financial resources needed to procure the system and realize the benefits as soon as possible. The U.S. government could now take the initiative and provide a much-needed stimulus through this proposed program and achieve numerous benefits that would permeate throughout the entire aircraft producers and airlines infrastructure.

## ELECTRIC AND HYBRID VEHICLES

#### *What Is The Nation's Problem?*

The Automotive Industry has several problems that impact the entire nation. First, auto emissions are polluting our cities beyond maximum allowable levels. Local emission programs can only reduce a fraction of vehicle exhaust and do not

compensate for the expanding number of automobiles. Secondly, more than half of our oil is imported. 60 percent of this oil is used to fuel autos and light trucks whose internal combustion engines are only 25 percent efficient. This inefficient use of oil, when compounded by our energy dependency, burdens our trade deficit. Thirdly, the global competitiveness of the U.S. auto industry has slipped steadily over the last 20 years. The Europeans and Japanese have captured large portions of our national market. U.S. automobiles are perceived to be lower quality than our foreign competitors. While the industry has made great strides in this area, we have not recaptured lost sales.

By reducing the number of vehicles powered by internal combustion engines, the U.S. could become more energy efficient, less oil dependent and environmentally safer while we create jobs, reduce the deficit, and regain leadership of the global automotive industry.

#### *What Can the Defense Industry Contribute to Solving the Problem?*

The Defense industry can use its leading edge technologies in power electronics, software, electric propulsion, and advanced high energy density batteries to develop electric and hybrid vehicle propulsion systems. These industries can develop and manufacture high power electronics for battery chargers required throughout the nation's infrastructure. Current, pressure and flow sensors could also be used to improve the safety of fuel transfer.

#### PROPOSED PROGRAM

While defense technologies for electric, hybrid, and alternative fuel vehicle commercialization are currently available, they cannot by themselves solve the problems described above. The United States needs to be first to market with vehicles to recapture the national and world markets. Energy storage capability must be readily available with a supporting infrastructure. Being first to market requires a low cost, high volume manufacturing capability in place by 1998.

A hybrid power train program would accelerate development and create a manufacturing base that would be ready before model year 2000. Some present government programs only fund development. This program will focus on establishing a manufacturing base for automobiles, trucks, buses and other vehicles. The creation of a supplier base to support high volume manufacturing is required to ramp up production by model year 1998. The need for low emissions, high efficiency, and extended range make the hybrid vehicle a potential high volume vehicle.

A major barrier to entry of electric and hybrid vehicles is affordable batteries with sufficient power for these vehicles. The United States Advanced Battery Consortium (USABC), is in the process of developing several new types of high power batteries. However, there is a need to create a manufacturing base for commercialization of these advanced batteries. Often these technologies, once developed, are manufactured overseas with no benefit to U.S. citizens. This program would need to consider safety of use, reconditioning, and disposal of these new types of batteries. The manufacturing capability should be in place to meet the demand of the electric and hybrid vehicle markets expected in 1998. The program should also consider applications for buses, trucks and other vehicles. A four year program would be valued at \$300M.

U.S. industries are currently developing technologies to use alternative fuels in transportation. The Department of Energy, National Labs and EPRI have taken the lead in establishing industry standards. A program is needed to install an infrastructure for electric and hybrid vehicles as well as natural gas, methanol, ethanol and other fuels. Quick charge capabilities are needed to reduce the 6-8 hours of charge time down to 10 minutes. Natural gas requires special high pressure tanks and materials to reduce the storage volume requirements. Methanol and ethanol would use these tanks as well. This program will create jobs in areas of electronics and fuel storage. A program to phase in the infrastructure would cost \$100-\$200M over 3 to 5 years with support from states and energy delivery organizations.

#### *What Should The Government Do?*

The government can accelerate ongoing efforts by including manufacturing in future programs. Help is also needed in changing legislative guidelines to qualify hybrid vehicles as zero emission vehicles. The government could accelerate advanced battery availability by manufacturing both the short and the long term batteries under development by USABC. Safety, efficiency, and environmental legislation could accelerate the market. Funding of this program could be cost shared between government and industry, possibly ramping to 100 percent government funds to accelerate the program for introduction by 1998 and high rate production by 2000. The



infrastructure money could be channeled through the states to add participation incentive to assure full implementation.

#### *What Will This Do For Defense Industry?*

The Defense Industry can use its electronics, software, and control technology to develop the optimal electric and hybrid vehicle propulsion systems. High volume battery manufacturing and infrastructure installation would create new expanding business areas. This would give the defense industry solid management and engineering resources to matrix back and forth as required from military to commercial projects. The total impact on jobs for the vehicle and battery production is—\$1M, with another 2M jobs related to the infrastructure needs.

#### *What Will This Do For The Nation?*

The nation would benefit economically from this program by creating a new industry. The United States would become a leader in vehicle propulsion, energy storage, and infrastructure. This program would create jobs in new areas and not displace other workers. The defense electronics technology base would remain intact by stabilizing defense employment. Production of electric and hybrid vehicles could significantly increase our total exports—thus decreasing the national deficit, and could also move the U.S. towards energy independence while positioning us as a world leader in environmental issues.

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### GLOBAL AIR TRAFFIC CONTROL

#### *What Is The Nation's Problem?*

Production of commercial air transport is continuing and the number of aircraft is expected to double by the year 2010. Public demand for air transport is increasing and the U.S. Air Traffic Control (ATC) system is approaching its present capacity. Transoceanic air traffic is expected to undergo an even greater growth rate, increasing four-fold by the year 2020. This growth will introduce many opportunities in microwave landing systems; global satellite based navigation and communication systems; automated, all-weather air traffic management systems; security and drug interdiction systems; automatic dependent surveillance; airport and secondary surveillance radars; and air traffic alert and collision avoidance systems. These improvements are needed to increase safety, capacity, efficiency, and flexibility—while reducing operating to the Federal Aviation Administration (FAA) and U.S. airlines.

Barriers to more efficient ATC and airlines operations include detection of erroneous aircraft incursions onto runways, jet exhaust wake vortex detection, and automation to better manage and optimize flight profiles and reduce airline departure delays. Some airlines have estimated that they could save at least \$300 million annually, per airline, through optimized flight profiles alone. Furthermore, about 200 accidents occurred in 1992 on the airport surface dealing with human error, and the average airlines surface delay time was 14 minutes. It is estimated that 30–60 percent airline fuel savings could be achieved for every 5 percent reduction in time in aircraft operations—and through advanced automation accidental runways incursions could be reduced by 80 percent.

To ease the present capacity limitations and to address the projected air traffic growth, there needs to be a two prong approach. The ongoing existing National Airspace System implementation projects need to be completed to provide the quantities and operational improvements called for in the present plans. For example, the U.S. FAA has contracted for less than 40 percent of for in the surveillance systems required to modernize our National Airspace System. Obsolete equipment will still be in use once current procurements are completed. This results in safety and efficiency compromises as well as limiting system capacity and increasing operational costs. In addition, the current production plans will risk shutting down production lines—requiring costly start ups in the future. At the same time the new developments and technologies need to be initiated to prepare for the future.

#### *How Could The Defense Industry Contribute To Solving Problem?*

The current situation in the defense industries has resulted in increased unemployment in our high technology workforce, and excess capacity in manufacturing. An acceleration of the production schedules for required ATC systems along with simultaneous product improvements that can be added during the follow-on production can create jobs, reduce overall life cycle costs of the projects and at the same time increase safety and efficiency. For example, windshear detection and increased processing capability could be added to the next production buy of the ASR-9. Similarly, processing capability to use the Mode-S data link that is emerging as an international standard to transmit precise satellite information processing information



from the aircraft to ground based recovery stations could be added as part of the planned follow-on production.

These relatively modest investments for new features could be combined with improvements to increase reliability and maintenance capability. For example, improvements during the current run of the ARSR-4 could save the Government, over the life of the program, as much as \$150M.

Looking to the future, many organizations in the defense electronics industry could leverage the advanced surveillance, data fusion, and automated information processing technology that they are providing for national defense. Examples are military systems that span the electromagnetic frequency spectrum and include ground-based radars, electro-optical/infrared surveillance systems, laser radar, and command and control automation to cite a few.

#### *Program Description and Outline*

Structure a program to develop, test, and lead to procurement of advanced air traffic systems to meet the requirements and provide benefits discussed before. Funding: Fiscal year 1993, \$385,000; fiscal year 1994, \$420,000; fiscal year 1995, \$510,000; fiscal year 1996, \$510,000; and fiscal year 1997, \$510,000.

#### *What The Government Should Do*

Legislation should be enacted to continue the National Airspace System projects. Budget reprogramming actions or supplemental budgets should be initiated for fiscal year 1993 funding to guarantee continuous production. Congress will need to approve the FAA and DOD requests.

Legislation should be enacted and funding appropriated to industry under Department of Transportation (Federal Aviation Administration) cognizance. The program should address advanced airport surface traffic automation and terminal and en route/oceanic airspace automation.

#### *What The Program Will Do For The Defense Industry*

Implementation of this two-step program will capitalize on the U.S. Government's investment in defense technology and will transition the technology to the commercial sector to provide performance and safety benefits not previously viable or available to the air transport industry and the U.S. public.

Timely execution of these programs will not only keep production lines open to maintain domestic capacity but it will provide the basis for international sales. As a direct result, jobs are preserved and additional new jobs are created to serve the expanded markets.

The program could preserve about 10,000 jobs alone and allow highly skilled quality employees to serve the general public as well as supporting our personnel in uniform and defense of the nation. Implementation of this advanced ATC system would result in approximately \$6 billion of revenue through the year 2010 and facilitate defense transition, competition, and strengthening of the commercial air transport marketplace.

#### *What The Program Will Do For The Nation*

The program will play a crucial part in strengthening the U.S. air transport industry. U.S. airlines, who are ailing economically, will save hundreds of millions of dollars per year through optimized flight profiles and reduced fuel consumption, delays, and weather impacts—as well as offering safety improvements to the flying public. Many of these benefits will accrue to the FAA as well as in terms of reduced operations and maintenance costs. U.S. electronics manufacturers will be able to apply dual-use advanced technology to maintain and expand employment levels and market share.

Job availability and security for all organizations involved in the industry, should be strengthened greatly. Commercial air transport and aerospace is one of America's largest economic and commerce sectors. It provides a substantial number of high paying jobs—presently accounting for about 1,240,000 jobs for aircraft and electronics producers, and airlines operations and maintenance personnel—or roughly 10 percent of the national labor force.

Strengthening the technology and manufacturing base of this important civil sector domestically will support significant penetration into the international commercial markets. The high technology electronics and systems experience that has protected our country militarily, will strengthen our industry and protect us economically in the competitive global marketplace. It will help U.S. industry increase global market share, while retaining technology leadership creating jobs and opportunities after the transition from defense to commercial markets. Most importantly, the new equipment will significantly enhance safety while simultaneously increasing the capacity of the National Airspace System.

The Defense technology is currently available to realize the capabilities summarized in this reinvestment proposal. The technology needs to be designed into the existing Air Traffic Control system to develop an optimum solution to improve safety and efficiencies. However, the FAA presently lacks all of the financial resources needed to procure the system and realize the benefits in a timely manner. The U.S. Government could now take the initiative and provide a much-needed stimulus through this proposed program and achieve numerous benefits that would permeate through the entire air transport infrastructure.

#### STATEMENT OF SENATOR D'AMATO

Senator LAUTENBERG. We are joined now by my distinguished colleague from across the aisle and across the river, Senator D'Amato from New York. And we invite you to make any comments you would like.

Senator D'AMATO. Mr. Chairman, let me first of all commend you for moving as expeditiously as you have in calling this hearing. I was unable to be here for the beginning of this hearing because I was at a Banking hearing until a few moments ago. I would like to submit my written statement for the record as if read in its entirety. I have another engagement, so I will have to leave shortly.

Senator LAUTENBERG. Without objection.

Senator D'AMATO. Let me say this: I intend to work with you, Mr. Chairman, in support of supplemental infrastructure funding. I think it is certainly important that these dollars be allocated to the kinds of projects that are going to stimulate long-term capital investment. And by that I'm referring to the kinds of projects that will make growth and development possible and move the economy forward.

That's not an easy task because there will be so many great demands for these additional dollars. But I look forward to working with you to see to it that we can improve our infrastructure in a manner that will help create economic momentum, particularly in the Northeast which we both represent. There are a number of very exciting opportunities to help move us forward in a very dramatic way.

So let me commend you, Mr. Chairman, for your work.

#### PREPARED STATEMENT

Senator LAUTENBERG. Thank you, Senator D'Amato. Your written statement will be made part of the record.

[The statement follows:]

#### STATEMENT OF SENATOR D'AMATO

Mr. Chairman, I am happy to attend our subcommittee's first hearing of the 103d Congress. I join you in welcoming our newest member, Senator Specter, who is a longtime supporter of transportation programs especially mass transit and Amtrak. His participation will enhance the work of this subcommittee.

Today's hearing will explore whether we should invest more funds in the Nation's infrastructure. "Rebuilding America" was a major theme of President Clinton's campaign. He called for an additional \$20 billion for waste treatment and disposal, building and rebuilding our bridges, highways, rail and transit systems. Despite downscaling of that estimate during the transition of administrations, it now appears that an economic stimulus package of about \$15 million to \$20 million will be presented shortly by President Clinton.

The 1990 budget summit's artificial "firewalls" between spending for domestic, defense and international programs have come down. Domestic spending for transportation can be increased, but we must pay for it. The national deficit remains at about \$290 billion and it will double in the next ten years unless steps are taken

to reduce it, according to Congressional Budget Office testimony on January 25 to the Senate Budget Committee. How much do we want to spend on infrastructure—or on other programs—in the face of this daunting deficit?

Issues likely to be raised today include:

- What is a good estimate of real infrastructure needs?
- Where will the additional funds come from?
- Will increased infrastructure spending increase productivity?
- What can be done to streamline the federal transportation grant and procurement process?

I look forward to hearing the testimony of today's witnesses.

Thank you, Mr. Chairman.

#### WAYS TO IMPROVE OVERALL ECONOMIC PICTURE

Senator LAUTENBERG. I am happy to hear that you share my view. We have an enormous deficit problem, everyone knows, and we would like to get our debt down. I know that you were at the Banking Committee and couldn't be with us earlier. I'm sorry for that, because we work together well on such projects as the one being considered here. One way to improve this Nation's overall economic picture is to invest in ways that produce economic activity—more jobs, more investment, more taxpayers, more people away from unemployment rolls.

We are not encouraged at all by the news we hear in terms of where the economy is. There have been layoffs of enormous proportion. You and I, Sears Roebuck has quite a significant presence in our States; IBM is headquartered in your State; Boeing; you go through the litany, it is not a good picture. And one of the ways that we think will help this recovery get a little more vibrant is by making the appropriate kinds of investments.

No one knows better than you how important traffic movement is in our area, whether it is by private vehicle, by truck, by bus, by rail, by air, we have them all, and we need them all to be working efficiently. And I look forward to working with you on this.

Senator D'AMATO. Thank you, Mr. Chairman.

Senator LAUTENBERG. Thanks, very much.

Mr. Lamm, you are, as you note in your testimony—I am not sure whether you said it was unpaid, but volunteer as the president of the IVHS organization. You would be surprised what good talent we get without paying for it in Government. I learned that smaller paychecks don't necessarily inhibit one's productivity when one volunteers for service in either Government or community projects. So we are happy to have you.

And in that connection, I would like to ask you a couple of questions. This is not to ignore the bulk of your statement which dealt with balance in the transportation network and the cost for users.

We've heard from companies that the IVHS Program is underway. Do you believe that the public, private, academic interests are sufficiently coordinated, sufficiently participating in the development, operational, and scientific aspects of the IVHS system, and are getting appropriate balance and interest?

Mr. LAMM. Mr. Chairman, a few years ago at a previous hearing we all agreed that technology is not the problem, as far as IVHS goes. Coordination of the many activities was the real problem at the time. And the committee wrote into the DOT Appropriation Act a few years ago that you urged DOT to work with an umbrella organization, which we were in the process of creating at the time.



That is IVHS America, and I think it is serving the function which you wanted and which we designed it to do.

It is chartered by DOT as a utilized committee, and it performs advisory functions to DOT. But more than that, it provides an umbrella organization to get all of the private sector witnesses that you have had this morning—Tom Downs and his peers who are also members from the public sector and the academic community all in the same camp coordinating their activities to the extent that we can put together something like this strategic plan.

This represents not the work of the staff of 20 or so. It represents the input of more than 500 volunteers from these three large camps which do not often get together early enough and often enough.

Senator LAUTENBERG. The IVHS Program represents lots of things to lots of people, from the user, the driver, to the supplier to the people responsible for traffic management, air quality—we have been through the list of things. And personally, I am interested in seeing this country develop an aggressive IVHS industry. That doesn't mean that a company has to be totally devoted to it. There are technologies available that many companies can contribute. And I would like us to become the world leader in this industry.

One of the great assets we have, one of the few remaining, is the creativity and ingenuity of the American mind. And we have to take advantage of that special skill and talent. How well do you think we are positioned internationally to take leadership in the field of IVHS product?

Mr. LAMM. Well, IVHS America from the start has been open to membership all over the world, and we do have a fair number of Japanese members as well as a smaller number of European members. So within IVHS America, I guess we have a good understanding of what's going on around the world through international contacts with our members.

In my own estimation, some of the other parts of the world have a head start on us as far as utilization of the technology. My testimony mentions that a traveler guidance system, which is being tested with 100 vehicles in Florida, has, in effect, 300,000 vehicles equipped in the general market in Japan with roughly the same technology.

I happen to feel, having seen all of it, that ours is perhaps a generation or one-half of a generation ahead. On the other hand, both from the European interests, they see what is being done under the concept of IVHS America, the umbrella organization, as being something they do not have. And to me, it has been interesting to see both parts of the world scramble, in effect, to do the same kind of organizational refocusing that we have already done here.

I think, as you point out, our industrial expertise and our public sector expertise is going to be what is going to eventually develop the world leadership, and I frankly think we can. We do start out some years behind the scene, largely because there was a hiatus period of roughly 20 years where there was no Federal funding for the seed money to generate research in this highly technical area.

On the other hand, we have come a tremendous distance in a very short period of time. Three years ago, we were looking at a



\$2 million a year budget in the Federal Highway Administration for IVHS. Now, we are talking about \$660 million through the IVHS authorization period.

Senator LAUTENBERG. Well, the one thing we do know is that if we don't step on it that we will be left behind. There has been work in other countries that is very interesting, very far advanced. We have the capacity, frankly, I think, to catch up and pass our competitors. And we ought to do it. We invite them to come in with their technology. We invite them to participate.

But this is one industry, as I see it, that we ought not let escape us. We can go through tales of woe about things like the pollution control industry, where we used to dominate and we gave it away. We do not have to talk about such obvious things as the automobile industry. We can talk about those that are less visible.

But here is an opportunity for us to get going. And the commitment that I included in the ISTEA bill was to help us marshal not only a better operating system but resources for the future in terms of our dominance of an industry, including export and jobs opportunities.

Mr. LAMM. May I suggest, Mr. Chairman, you have heard from a number of IVHS America members this morning. And it might at some time be worthwhile to have a hearing or perhaps a less formal briefing for yourself and the other members and the staff of the subcommittee just to see in a little bit more detail about what's going on prior to the time you put the next DOT Appropriation Act together.

Senator LAUTENBERG. How does our approach compare to the consortium-developed Prometheus?

Mr. LAMM. Again, Mr. Chairman, it's been very interesting to me to see that the European Community has taken Prometheus and DRIVE, the two organizations that have existed previously, and they put them together—Prometheus, in its earlier stage, was almost entirely private sector organizations, and the DRIVE companion activity was the comparable government organizations. And they honestly didn't really have a means of interacting with each other's programs.

Following their introduction to what was going on in IVHS America, the European Community has undertaken coordination of these activities, and very simply it looks quite like IVHS America today.

Senator LAUTENBERG. Mr. Murphy, I was very much interested in your comments. You know, when you look at a couple thousand employees in your industry, it is small business. But you look at it across industrial segments in our country, it looks like big business. But when you have to compete for capital, and with superstructure that you need in place to get going, I guess you have to select out those portions of the marketplace that you can get into with a minimum capital requirement, because it is just not generally available.

So, if you would, tell me where you see projects that particularly suit you? You mentioned FAA and FTA. What other programs within those two parts of DOT that have the most interest for you and what caused AAI to make the decision to go into those areas?

Mr. MURPHY. Well, I think two factors led us to make the decision. First, the obvious decline in the defense environment. But second, the growing need—all the market studies showed that through the Clean Air Act and through energy conservation and decay of the infrastructure, that there was going to be Federal funding and market opportunity in these areas.

So our next step then was to examine what we were good at and try to align that with where we felt the opportunities would be. And that has led us into projects for the airport modernization program. Through the National Weather Service and FAA, we're doing an automated weather observation system. It will be installed in nearly 2,000 major airports around the country.

We are involved in applying our very excellent expertise in test equipment to the commercial airlines, our flight simulation capability in the commercial airlines. In the transportation area, one of the things we see that's important, although technology exists in many elements, you still need to bring technology together in a full project form. And a prototype project form is the least expensive way you can make that commitment.

So the capability of prototyping in a rapid and low cost manner is something that companies our size can do in many cases much better than the very, very large companies. So again, we saw the opportunity here to go after prototyping projects, but this depends on the recognition by the Federal funding agencies that prototyping is an avenue to prove, to integrate and prove the technologies toward the transportation field.

Senator LAUTENBERG. You heard Mr. Lamm, who is involved with both the Highway Users Federation and the IVHS American consortium talk about Federal advisory committees that assist in the IVHS area.

Do you think that we ought to try that mode with, let's say, FAA or transit and to try to get the interchange that exists under this kind of an umbrella in those areas?

Mr. MURPHY. I do very much. I think the IVHS has really broken some ice in that respect in acting as an integrator and a catalyst of information, which allows companies of our size to go to one source, in a sense, and really learn what the needs are.

I think in the light rail and transit area, that is still not available and would be a good area.

Mr. LAMM. Mr. Chairman, may I just point out, Federal Transit Administration and the transit industry are very active in IVHS America, too. There's the whole testing concept of a smart bus that would improve performance of transit systems in urban areas.

Rail light and the heavy rail segments of transit are not, as yet, and your question is very valid from that part of the transit industry.

Senator LAUTENBERG. We have not given you the big assignment and that is intelligent drivers. That is one we do not dare approach yet. [Laughter.]

Mr. Silcott, your company, Westinghouse, is well known in New Jersey—unfortunately less known today than it used to be. They are involved in a number of projects with FAA and among them, I am reminded, is the airport surveillance radar system, ASR-9,

which we have employed in lots of airports around the country, and the long-range radar system ARSR-4.

And we can look backward and wish that we had done things differently. But knowing what you now know about the Federal rules governing procurement as managed by the FAA, would you be making different decisions that you might have based on market conditions as they were, the bidding process as it existed?

Mr. SILCOTT. Yes; let me comment on those two programs specifically.

The FAA is moving away from a policy of fixed price development combined with fixed price long-term production programs. That is a death wish for a company to contract into combined fixed rate, fixed development, long-term programs, particularly when the specifications are performance specifications as opposed to descriptive specifications.

And the flexibility of the FAA to negotiate changes is very difficult because of the size and the competitive nature of those kinds of contracts.

The 20/20 perspective for us is we would not enter into another fixed price development, fixed price production, long-term program. Beyond that, I think we would encourage more flexibility in the performance requirement statements, so that both the contractor like us have more ability to offer improvement ideas within the development of the product and at the same time have the FAA in a position where they could accept those types of inputs.

Senator LAUTENBERG. Mr. Murphy, do you agree with that? I think that in your commentary, you said something about the pricing structure, the way it was done on the defense side and on the commercial side. Is this part of the problem as you see it?

Mr. MURPHY. I think our experience would certainly support Westinghouse's view on fixed price development programs. I think that we've gone through that experience in the defense industry in the interest of trying to control costs and we found that it really didn't work.

The customer didn't get what he wanted and we put a lot of companies out of business in the process. So I think that I would certainly support that we need a different structure for the development side and the application of technology into these areas.

Senator LAUTENBERG. Mr. Silcott, the programs and systems and equipment that Westinghouse has developed for the civil aviation community here in the United States, have those items been exportable to markets abroad?

Mr. SILCOTT. Yes, Mr. Chairman; the ASR-9 radar, in particular, in the last 2 years we've been successful in beating, primarily Thomsen CSF, a French subsidized corporation in Morocco, which was a longstanding country of French consumption, Tunisia, Panama, et cetera.

Senator LAUTENBERG. What have we learned from those governments or companies that maybe we ought to consider here when bidding for business?

Mr. SILCOTT. The preference in these countries is for American technology. The problem in most of these countries is they need low-cost financing. And we have a difficult time, particularly if there are two U.S. companies competing for a given opportunity in

a country, having the U.S. Government be as aggressive and supportive as, let's say, the French Government or the Italian Government or German or Japanese Government.

So one is, we need more support from our country politically.

Senator LAUTENBERG. You are talking now about in obtaining capital. Are you talking about marketing?

Mr. SILCOTT. We're talking both, sir. We're talking about our country helping market the technology advantages of our U.S. technology. And that happens on occasion when we're not competing two American companies together.

The other is support for low-cost financing. The name of the game in that international market is to be able to finance that country with long-term low-cost financing.

Senator LAUTENBERG. What do you think of the idea of having a Federal advisory committee for aviation similar to the IVHS America consortium?

Mr. SILCOTT. I would like to give that some thought, rather than just give you a fast answer. I would be glad to submit my thoughts on that in writing.

[The information follows:]

No, not necessarily. While Westinghouse's experience with IVHS America has been extremely positive, we do not believe that situation is analogous to the aerospace industry.

While the emergence and coordination of new technologies for ground transportation are still somewhat embryonic, the airspace management plan of the United States (developed by the FAA) is well established and considered the best in the world. The FAA has displayed vision and futuristic planning through the development of the National Airspace Plan (now called the Capital Investment Plan) and the Future Air Navigation System plan. Another agency or bureaucratic layer would not necessarily improve on these plans.

Furthermore, Congress has already called for the establishment of an acquisition roundtable (Department of Transportation and Related Appropriation Bill, 1992, 102d Congress, 1st Session, House Report 102-156), to be composed of senior industry officials and other non-FAA personnel to make recommendations and offer advice on ways to streamline the FAA acquisition process. We feel that any objectives regarding the improvements in implementing these plans could be fulfilled by this sort of activity.

#### SUBCOMMITTEE RECESS

Senator LAUTENBERG. Thank you all for your contribution. With that, we will recess this hearing. We will reconvene this subcommittee at the calling of the Chair. Thank you all very much.

[Whereupon, at 12:38 p.m., Wednesday, January 27, the subcommittee was recessed, to reconvene at 10:03 a.m., Tuesday, February 23.]



## **MATERIAL SUBMITTED SUBSEQUENT TO THE HEARING**

[CLERK'S NOTE.—In addition, some organizations who did not participate as witnesses today have asked that their statements on transportation investment be included in the hearing record. Those statements follow:]

## AMERICAN PUBLIC TRANSIT ASSOCIATION

## LETTER FROM JACK R. GILSTRAP, EXECUTIVE VICE PRESIDENT

January 27, 1993

The Honorable Frank Lautenberg  
Chairman  
Senate Appropriations Subcommittee  
on Transportation and Related Agencies  
SD-156 Dirksen Senate Office Bldg.  
Washington, DC 20510

Dear Chairman Lautenberg:

On behalf of the American Public Transit Association (APTA), I am submitting testimony for the record for your hearing on Investment in Transportation Infrastructure held on January 27, 1993.

APTA represents more than eleven hundred members, including bus and rail systems, their suppliers, and others committed to the advancement of transit service.

Attached is our paper titled, "Public Transit's Role In America's New Agenda: Policy Recommendations of the Transit Industry as Outlined by the American Public Transit Association." We have shared this paper with the new Administration. It provides recommendations and background information on: 1) Department of Transportation personnel; 2) transit budget issues; and 3) key transit issues. I am hopeful that it will be of use to your Committee as you develop an economic stimulus package.

Also enclosed is APTA's "Survey of Ability to Spend Federal Transit Funds During Fiscal Year 1993." APTA surveyed all of its transit agency members to gauge their ability to spend federal funds during FY 1993. Results indicate that we have the ability to create 405,000 direct and indirect jobs by spending an additional \$7.0 billion above what the ISTEA calls for in FY 1993 alone. For every \$1 billion in additional funds spent on transit, 58,000 additional jobs are created.

I look forward to working with you as you tackle the current economic issues and consider the value of increased investment in our transportation infrastructure.

Sincerely,



Jack R. Gilstrap

PUBLIC TRANSIT'S ROLE IN AMERICA'S NEW AGENDA: POLICY  
RECOMMENDATIONS OF THE TRANSIT INDUSTRY AS OUTLINED  
BY THE AMERICAN PUBLIC TRANSIT ASSOCIATION

INTRODUCTION

As we move toward the next century, increased availability and use of public transit will be a critical component of our national policies on competitiveness, energy, the environment, mobility, productivity, and economic development. One of the highest priorities for our

government should be an effort to expand investment in our nation's transportation infrastructure. Public transit is a critical part of that infrastructure.

This paper will provide recommendations and background information to the new Administration on: 1) personnel; 2) transit budget issues; and, 3) key transit issues. We have added a final section to this paper demonstrating how public transit is linked to almost all of the major policy initiatives supported by President-elect Clinton.

The American Public Transit Association (APTA) represents more than eleven hundred members, including bus and rail transit systems, their suppliers, and others committed to the advancement of transit service,

## PERSONNEL

### **Administration Personnel**

The Intermodal Surface Transportation Efficiency Act (ISTEA) is landmark legislation that recognizes all modes of transportation are connected into one, overall transportation system. The new Act sets priorities to establish a truly intermodal surface transportation network and calls for greater cooperation among the various modes of transportation to achieve that intermodalism. The ISTEA and the Clean Air Act Amendments of 1990, adopted a year earlier, recognize that in order to conserve energy, reduce air pollution, and increase mobility, we can no longer rely solely on automobiles to get around. Instead, we must link all modes of transportation to provide the most efficient network possible.

The purpose of the ISTEA is best outlined in its statement of policy: "to develop a National Intermodal Transportation System that is economically efficient, environmentally sound, provides the foundation for the Nation to compete in the global economy, and will move people and goods in an efficient manner."

This new sense of intermodalism in transportation policy demands the hiring of Administration officials who will share the ISTEA's vision of intermodalism. We urge the appointment of individuals who are not "single mode" experts, but who have experience and insight into the inter-connectedness of all modes. Over the past four years, and especially since the adoption of ISTEA, the transit industry has become a client not only of the Federal Transit Administration but also the Federal Highway Administration, and the Federal Railroad Administration. We believe the appointments to all of these agencies must demonstrate a commitment to the best transportation solutions to mobility problems rather than a commitment to a particular mode. APTA also supports the widest possible diversity in personnel in Department of Transportation positions.

### **Transition Assistance by Current FTA Employees**

In the past, APTA has had the opportunity to work with many officials and employees at the Federal Transit Administration (FTA) and the Department of Transportation as a whole. There are several people at the FTA that would provide the incoming administration with helpful information on the transition. We look forward to providing our specific recommendations in a future meeting.

## TRANSIT BUDGET ISSUES

### **Background on Transit Funding**

Federal funding for transit declined precipitously during the eighties, a total of 52% in real terms in the last twelve years. In 1981, transit received 20% of all U.S. Department of Transportation (DOT) budget authority. By 1991, transit's share of DOT budget authority had dropped to less than 11%, about half of what it was a decade earlier. Federal assistance also meets a smaller percentage of transit funding needs than it did ten years ago. In 1981, federal assistance represented 78% of transit capital spending in urbanized areas; by 1989 the federal share had dropped to 61%.

In 1981, federal assistance was 15% of all transit operating revenue; by 1990 the federal share had dropped to under 5%. Federal operating assistance appropriated for urbanized areas declined by 56% in constant dollars between 1980 and 1992. In contrast, between 1980 and 1990, fares increased by 32% in constant dollars and state and local operating aid increased by 69% in real terms.

In 1981, highways received two dollars in federal funds for every federal transit dollar. In 1991, highways received four and one-half dollars in federal funds for every transit dollar. Over the past decade, federal budget authority for highways increased 60% while budget authority for transit declined by 30%. The decrease of transit budget authority by 30% does not fully show how much federal funding for transit has plummeted. The actual purchasing power of federal transit funds is less than half the level of a decade ago if inflation is considered.

The loss of federal funding has been accommodated by service cuts, fare increases, and more state and local assistance. Continuing to replace federal operating assistance has become more difficult for city, county, and state governments because of cuts in other federal and state programs.

Not surprisingly, the cuts in transit funding have meant only modest ridership gains in the 1980's. Replacing lost federal assistance by raising fares makes it almost impossible to achieve national goals. Each 10% increase in fares results in a loss of 4% of transit riders. National goals to reduce energy use, pollution, and congestion call for increased transit ridership.

### **Fully Fund The Intermodal Surface Transportation Efficiency Act of 1991: A Key Strategy for Long-Term Economic Growth**

As proposed by President-elect Clinton, transit's top legislative priority is full funding of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). (Please see attachment (1) for the Clinton/Gore Campaign statement on transit.)

The ISTEA has been hailed as landmark transportation legislation and one of the only job creation bills of the year. The ISTEA demonstrates a federal commitment to increased transit investment and use. It attempts to correct modal biases at the federal level. It authorizes substantially increased funding for transit. The new authorization law grants localities the flexibility to use a substantial amount of surface transportation funds for either transit or highways. Under most categorical programs, it equalizes the matching share required at the state and local level and it requires better transportation planning and promotes effective land use policies.

Unfortunately, appropriation levels have fallen far short of the levels authorized by ISTEA. Transit programs are funded at \$3.6 billion in FY 1993, the same as in FY 1992, while the



ISTEA called for a FY 1993 spending level of \$5.2 billion. If the ISTEA were fully funded in FY 1993, as President-elect Clinton has proposed, an additional 93,000 jobs would be created. (Please see attachment (2) for a more complete summary of FY 1993 appropriations by program.)

We believe that funding for transit, and surface transportation programs generally, should adhere to the priorities set forth in the ISTEA. The decisionmaking processes established under the ISTEA are important to balancing economic, environmental, and mobility interests. They foster prudent long-term investments in the transportation infrastructure. For every \$100 million spent on transit, some 6,000 jobs are created or maintained.

#### Restore Formula Transit Funding to Communities

Funding reductions in the FY 1993 Section 9 and 18 programs have had a particularly adverse impact on transit operations across the nation. Transit operators in cities of all sizes, and rural communities, cannot replace aging buses, perform necessary maintenance on the existing capital investment, and make required service improvements on bus and rail systems. Formula programs were funded at \$1.7 billion in FY 1993 rather than the \$2.8 billion authorized by ISTEA.

Funding at ISTEA levels would prevent the layoff of bus drivers and mechanics, ensure affordable, reliable transit service, and provide access to job opportunities for transit dependent persons and others. It would also spur job creation in the transit supply sector, expedite implementation of accessible transportation service for persons with disabilities as required under the Americans with Disabilities Act (ADA), and get cleaner buses on the street sooner.

#### Fully Fund Operating Assistance

Full funding of transit operating assistance would retain current jobs, support new jobs, and permit service expansion. Operating assistance in FY 1993 is \$217 million less than the authorized level of \$1.0 billion. These funds will prevent the layoff of drivers, pay for maintenance of vehicles and equipment, and avert cutbacks in bus and train service. Current formula apportionments to smaller urbanized areas in 24 states are insufficient to fund authorized operating limits. Operating aid to rural transit operators was reduced by over 14%.

#### Expand Funding for Major Capital Investments

FY 1993 transit appropriations also fail to fully fund major capital investments in rail new starts and extensions, rail modernization, and bus facilities at levels authorized under the ISTEA. These funds would be used to support new rail systems and rail modernization that will serve transit riders in our most congested and polluted areas of the nation. APTA survey information indicates a demand of some \$70 BILLION in such needs over the next five years.

Additional funds are needed to fund ISTEA-authorized programs for research and planning programs. These include the better coordination of transportation planning at the state and local level as required by federal law, and research and development aimed at the more efficient delivery of services.

#### Transit As Part of an Immediate Economic Stimulus Package

As Congress and the new administration develop an economic stimulus package, we urge that transit funding be an essential part of such a program.

APTA supports President-elect Clinton's proposal to establish a "Rebuild America" program that increases the federal investment in transportation, a national information network, environmental technology, and defense conversion. The public transit industry believes that it can make an important contribution to this effort. (Please see attachment (3), a policy statement on "Public Transit Elements of "Putting People First" for further details.)

President-elect Clinton's "Rebuild America" Program, calling for an additional \$20 billion for infrastructure and his vision to see the ISTEA fully funded, are testimony to his belief that increased investment in public transit will help us achieve many national goals.

APTA has surveyed all of its transit agency members over the last three weeks to gauge their ability to spend federal funds during FY 1993. Preliminary results indicate that we have the ability to create 405,000 direct and indirect jobs by spending an additional \$7.0 billion above what the ISTEA calls for in FY 1993 alone. For every \$1 billion in additional funds spent on transit, 58,000 additional jobs are created. (Please see attachment (4) a "Survey of Ability to Spend Federal Transit Funds During FY 1993." Also, attachment (5) is an editorial on this issue that appeared in Passenger Transport.)

### **Meeting the Cost of Federal Mandates**

Over the past several years, Congress has enacted several comprehensive pieces of legislation that are imposing great costs on the transit industry. Both the Americans with Disabilities Act (ADA) and the Clean Air Act Amendments of 1990 impose mandates without providing the financing to carry them out.

The transit industry supports these laws and the policies they represent because the ADA will increase mobility for all people with disabilities and the Clean Air Act Amendments will help reduce air pollution and conserve energy. However, full funding of the ISTEA is necessary to even begin to implement the mandates established in both of these laws.

For example, in the provision of services to people with disabilities, there is a growing and alarming trend toward health and human service agencies discontinuing their transportation services for their clients and "dumping" them on the local public transit system who must provide service under the ADA. This practice adds a tremendous burden to an already challenging financial struggle. A DOT study sets ADA implementation costs at over \$900 million per year for the transit industry.

We are hopeful that Congress and the new Administration recognize the value of helping the industry with the costs of federally mandated operating increases resulting from federal mandates. If transit operators are forced to raise fares and reduce service to pay for federal mandates, there will be a corresponding reduction in transit ridership. This will undercut transit's ability to fulfill its role in achieving national goals related to the environment, congestion, mobility, energy conservation, and the economy. For every 10% increase in fares there is a 4% reduction in ridership.

### **Earmarking**

Congressional earmarking of Section 3 discretionary funds reached new levels in the FY 1993 Transportation and Related Agencies Appropriations Act. All of the funds appropriated for the Section 3 New Start/Extension program and the Section 3 Bus and Bus Facilities program were earmarked in this year's appropriations process. Funding for the Section 3 Rail Modernization program is allocated by formula. Unlike the Section 9 and Section 18 transit formula programs, which help support normal replacement and operating costs for all transit systems, the Section 3 program is intended to support major capital investments that cannot be met under the formula programs.

Earmarking by key congressional committees reflects an understandable desire by Members of Congress to have an input into how transportation funding is spent, but it is also a reaction to how the past two Administrations have viewed the Section 3 major capital investment program. As indicated earlier, transit funding has been cut drastically over the past twelve years and the Executive Branch sought to eliminate major new investments as too expensive. The entire transit program including Section 3 was underfunded. Without earmarking, it is doubtful that any new rail projects would have been funded during the past decade, and many other worthwhile projects would not have been carried out.

The FY 1993 Transportation and Related Agencies Appropriation Act also increased funding for the Section 3 program by 29% while reducing funding for the Section 9 and 18 formula programs by 14% (Section 3 new starts increased by 34%). Section 3 programs were funded at 85% of the authorized level while Section 9 and 18 formula programs were funded at only 60% of the authorized level. The demand for both formula and discretionary funding far exceeded funding available in FY 1993. APTA has advocated that all programs be funded according to the ISTEA authorized proportions.

### **Reestablish Equity in Transit Program Investment**

In the FY 1993 transportation appropriations bill, Congress shuffled resources within the transit program in favor of major new projects earmarked for funding under Section 3 and away from formula funding under Section 9 and 18. Thus, while the transit program grew by only \$37 million in FY 1993, formula funding was reduced by almost \$300 million or 14%. These formula funds are essential to all grant recipients and should fund bus replacement projects and other routine capital projects. The inequitable treatment of the formula program in the FY 1993 transportation appropriations bill and the disproportionate increase in Section 3 will be a significant issue for the transit industry next year since it produced "winners" and "losers" within the industry.

### **Trust Fund Balances and the Mix of Transit Funding Sources**

Funding for the Federal Transit Program is derived from both general revenues and the Mass Transit Account of the Highway Trust Fund. In rough terms, the ISTEA calls for about 55% of the transit program to be funded from the Trust Fund and 45% of the program to be funded with general revenues. The ISTEA provides that about 85% of the Section 3 funding and 35% of the formula funding come from the Trust Fund. APTA urges that the mix of funding sources not be allowed to alter the balance of programs and projects established in the ISTEA.

Currently, the projected unexpended balance in the Mass Transit Account of the Highway Trust Fund is about \$10 billion, of which some \$5 billion is committed but not yet obligated. In other words the uncommitted funds in the Mass Transit Account equal about \$5 billion. If funds are appropriated at the ISTEA authorized levels, this balance would fall to about \$1.5 billion by the end of the current authorization at the end of FY 1997. Additional funding could be provided if the 2.5 cents per gallon gasoline excise tax that currently goes to deficit reduction until 1995 were extended with a portion dedicated to transit.

### **Gas Tax Increases to Fund Infrastructure Improvement**

Transit receives 1.5 cents of the current federal excise tax on gasoline and other fuels. Twice during the 1980's when the excise tax was increased, transit received 20% of the increase with the remainder dedicated to highway programs. The transit industry recommends that consideration be given to additional increases in the fuel tax to finance long-term investments in transportation infrastructure with transit receiving a substantial portion of any increase. As part of the ISTEA authorization process, the transit industry

urged that an increase of 7 cents in the excise tax on gasoline be dedicated to the transit program.

### KEY TRANSIT ISSUES

#### **Low And No-Cost Quick Impact Actions**

##### Aggressively Promote and Implement the Transit Pass Commute Benefit

After years of effort by the transit industry and key Members of Congress, the so-called "transit pass" commute benefit was included in the National Energy Policy Act and signed into law by the President on October 24, 1992.

Effective January 1, 1993, employers may provide their employees "transit passes" worth up to \$60 per month, tax-free. The new law is designed to promote the use of public transit by commuters. The "transit pass" provisions increase employer-provided transit benefits, while limiting the value of tax-free parking benefits to \$155 per month.

Commuters who drive to park-n-ride lots to use public transportation may receive up to \$155 in tax-free parking benefits from employers, in addition to the \$60 per month transit commute benefit. Vanpool riders are included in the new benefit.

While the expansion of the tax treatment of transit pass benefits is welcome and long overdue, it is little more than an opportunity until employers take advantage of it. Already, APTA has announced its intention "to mount an intensive public education effort to encourage commuters and businesses to use this new tax benefit to its maximum."

Spending a small amount of money on implementing the transit pass commute benefit would have a very positive impact on commuters and businesses. APTA and the Association for Commuter Transportation have provided the FTA with a proposal regarding the transit commute benefit. It is now pending before the agency and should be considered as a low-cost quick impact action to increase transit ridership.

##### Expand Development and Use of Park-n-Ride Facilities

In addition to the transit pass commute benefit, greater use of park-n-ride facilities should be encouraged. Park-n-ride facilities do not cost very much to operate and provide a good opportunity for people to commute to work using vanpools or buses. This would move more people more efficiently than using single occupant vehicles. This is another low-cost high impact action that would increase the use of public transit.

##### Transit Promotion and Advocacy by the Clinton Administration

The Clinton/Gore Campaign helped public transit in an indirect way by travelling the country by bus during the campaign. Once in office, President Clinton, Vice President Gore, and Cabinet officials, particularly in DOT, should continue to make public announcements on the benefits to people and to our nation by increasing our use of transit. This could be achieved at absolutely no cost but it would be highly symbolic.

Officials of the Clinton Administration should encourage the use of public transit. Participation by Administration officials at APTA's Washington Legislative Conference in March would be an early opportunity to express support for transit. Public events during Transit Appreciation Week, and statements on transit's relation to the infrastructure, energy conservation, the environment, mobility, and the economy would also be helpful.



### **Defer Action on FTA Reorganization**

We are concerned that the FTA Administrator has proposed a major reorganization of the agency. On December 4, 1992, APTA contacted the current FTA Administrator stating that "the implementation of such a significant reorganization at this time would limit the ability of the incoming Administration to examine issues affecting the federal transit program, and to make appropriate decisions concerning those issues. While some of the changes contemplated in the reorganization certainly may be necessary, (we) believe that it is best left to the incoming Administration to determine the appropriate direction for the federal transit program."

### **DOT Proposal for FTA/FHWA Merger**

Recently DOT has proposed that consideration be given to merging the Federal Transit Administration and the Federal Highway Administration (FHWA) into one entity. The ISTEA includes a congressional mandate calling for a study on such a merger. APTA believes any action should not preempt completion of that study.

The ISTEA also created an Office of Intermodalism which serves as a connection between the FTA and the FHWA. This allows the two agencies greater cooperation but retains their autonomy. Congress has taken several steps to assert FTA's mission and independence. For example, the Urban Mass Transit Association (UMTA) was renamed the Federal Transit Association to demonstrate its national mission.

Traditionally, the transit industry has expressed great concern about proposals to merge the two agencies based on the sheer size of the FHWA, which has thousands of employees versus several hundred in the FTA. We are fearful that the mission and purpose of the FTA and its role as a transit advocate would be overwhelmed by a merger with such a large agency as FHWA.

### **Fashioning a Transit Counter-Balance to the National Highway System**

The ISTEA requires the Secretary of Transportation to submit to Congress a 155,000 mile National Highway System, or "NHS", by December 18, 1993, with Congressional approval required by October 1, 1995. There is, however, no parallel formal process or requirement in ISTEA to recognize or promote the equally important new ISTEA commitment and national interest in expanding public transit and shared-ride services.

Drawing and approving the "NHS" map will reconfirm a traditional national commitment to highways, a commitment that must be balanced with an equally compelling vision of the larger role that transit must play in the years ahead. To fashion that transit vision, organizations that operate the full spectrum of metropolitan and intercity transit-related services, nationwide, have joined together to draw and document an integrated national system of transit services that warrants a federal priority comparable to the NHS.

The nation's urban and rural public transit providers, AMTRAK, nationwide high-speed rail interests and the businesses and industries that are committed to aggressively expanding this integrated set of people-moving services and facilities will, in the coming weeks and months, provide to the Administration, Congress and the American public another map offering a compelling display of the importance of a national, system approach to public transportation.

APTA and other partners in this effort look forward to support from the new Administration in this effort as an adjunct to its already expressed support for full funding of the ISTEA.

## Drug and Alcohol Regulations

The DOT Appropriations Act of 1991 required the Federal Transit Administration to issue regulations controlling the use of illegal drugs and alcohol in the transit industry. The FTA proposed rules would require the establishment of a drug and alcohol testing program for mass transportation employees responsible for safety-sensitive functions. This is a significant rulemaking activity because of its scope and substantial public and congressional interest.

The DOT published proposed drug and alcohol testing regulations on December 15, 1992. The rules concerning drug testing are substantially the same as the prior federal rules, issued in 1988, which were overturned by a federal court. The proposed rules on alcohol testing are extremely controversial since DOT/FTA have never been involved in this type of testing program. The proposed rules suggest that alcohol testing be performed with breath testing devices for pre-employment, pre-duty, random, reasonable suspicion, post accident, and return to duty testing.

Due to the fact that Congress did not allocate any funding for implementing a drug and alcohol testing program, there is a concern about the financial impact of these regulations. These regulations are also a major issue for labor.

## Inequities in Major Investment Decisions

There is an uneven playing field between highways and transit when it comes to the federal process for major capital investment decisions. This inequity becomes apparent when comparing the project development process, from conception to construction, between transit projects and highway projects. The process for developing transit projects requires many more complicated steps than does the process for developing highway projects. In general, FTA headquarters in Washington is required to act on major decisions at numerous points in transit project planning and development while all major decisions on highway projects are delegated to and or made at the State and local level. There are basically three major disparities between the two processes.

First, transit funding is discretionary-based which creates start/stop funding levels for transit planning while highway funding is formula-based and more predictable. More specifically, transit discretionary funding for major capital investments requires a grant-approval in Washington while highway projects can be advanced by States through "contract authority" with costs reimbursed as projects proceed, greatly facilitating the flow of funds for highway projects.

Second, fixed-guideways/transit projects are limited to a single corridor planning approach where only one corridor at a time can be designated for further analysis and funding (except in areas that have bad air quality in which multi-corridor studies may be conducted) while highways follow a multi-corridor approach.

Finally, FTA approval in Washington is needed to initiate alternative analyses for the selected priority corridor and FTA must approve each of 15 reports submitted by the local agency. On the other hand, FHWA defers to a local decision-making process in which MPO's can certify that highway plans will accomplish Federal policies and objectives. Federal approval for each stage of highway planning and project development is not required as it is for transit projects.

There are many negative impacts because of the inequities in the project development processes. Projects are backlogged as a result of the complicated and numerous regulations. Many States and localities are forced to turn to the earmarking process if they want to guarantee completion of a transit project. All of these disparities produce a biased environment, create inefficiency in the funding of transit projects, and could encourage States and localities to opt for highway projects over transit projects.

## Stewardship and Effective Use of Federal Assistance

There have been some organizations who have been vocal about their criticisms of transit. For example, in October, 1989, a report known as the "Pickrell" report, analyzed the costs and ridership projections made for ten rail projects constructed in the U.S. during the past two decades. That study was funded by the Department of Transportation and it reflected the Administration's opposition to funding for new rail construction. The study concluded that there were significant forecasting errors, resulting in capital investments which would not have been made otherwise.

APTA found that Pickrell's analysis was strongly biased and the report's conclusions were grossly misleading. The "forecasts" used to support the arguments were preliminary projections made during the very early planning stage of the projects. In addition, the actual "data," which the report used to evaluate the accuracy of the forecasts, were no more than estimates using crude and superficial methods. Finally, the transit systems cited in the study were not representative of rail transit systems nationally, and were in fact selected to support the predetermined conclusion that rail transit is inefficient.

In addition to the Pickrell report, Jean Love and Wendall Cox of the CATO Institute published an October 1992 report that is based on several erroneous assumptions and contains numerous factual errors. (Please see attachment (6), a rebuttal by APTA entitled "A Critique of the CATO Institute Report on Mass Transit.")

APTA recognizes that administrative oversight of grant recipients could be improved in some cases, but we contend that the last two Administrations have misused their oversight authority in some cases and that the ISTEA provides the statutory authority to enhance current auditing practices. For example, the "triennial review" process, created as part of the Section 9 formula program, provides for an audit of each Section 9 recipient's use of funds every three years. In addition, one-half of one percent of all capital funding is used for project management oversight.

In general, we believe the transit industry has shown good stewardship of federal funds. We are eager to work with the new Administration on audit and oversight issues.

## TRANSIT'S LINK TO NATIONAL GOALS

Increased investment in transit will produce a wealth of benefits and is a key to achieving national goals established by Congress, both in the short-term and long-term. Not only will transit help us achieve our national goals related to the environment, energy, mobility, job creation, infrastructure, and international competitiveness, but transit is also linked to many of the priorities President-elect Clinton has said will be on his agenda during the next four years.

### Poverty and Urban Decay

President-elect Clinton has stated the need to address poverty and urban decay. Public transit plays an integral role in rebuilding America's inner cities and providing transportation services to our nation's economically disadvantaged.

APTA recently completed a survey which shows it is the economically disadvantaged -- often without an alternative means of travel -- who constitute the largest share of total public transit ridership. The survey also shows that 27.5 percent of transit riders have an income below \$15,000. If one excludes the New York City Transit Authority, then the percentage of transit riders with incomes below \$15,000 increases dramatically to 38 percent. This is nearly three

times the 14.2 percent of Americans below the Census Bureau's poverty level of \$13,924 for a family of four. (For a more detailed report of the profile of transit passengers, please see attachment (7), "Americans in Transit.")

Transportation economists believe that income and public transit use are inversely related, so that transit demand increases as incomes decrease. Accordingly, increasing poverty will result in an increase in transit use. The Census Bureau reports that in 1991 the number of Americans below the poverty line increased to 35.7 million - the highest number since 1964.

The transit industry believes it can work hand in hand with the federal government to reverse urban decay, rebuild innercities, and stop the upward trend of unemployment. Rebuilding a community's transportation infrastructure will not only restore pride to the neighborhood, it will put people to work. An efficient transportation network will not only bring business and consumers to a community, it will allow people to commute to and from their jobs.

### **Health Care**

Comprehensive health care legislation is a top priority facing the new Administration and the 103rd Congress. M. Joycelyn Elders, Director of the Arkansas Health Department, has been stressing for years that the missing link in a comprehensive health care plan is the ability to provide reliable transportation for those seeking medical attention. Public transit can fulfill that role by providing a safe, economical means for people to travel to and from their home to visit their doctor or hospital for routine care. This is true not only in our cities, but perhaps even more in our rural areas.

### **Impact on Manufacturers**

Transit systems are not the only members of the transit industry that are affected by insufficient federal funding. This is a critical time for the supply side of the transit industry also. Purchase of equipment is at an all time low and has been estimated to be less than half of what it was several years ago. Most transit industry suppliers are operating in a cutback or layoff mode. Some are presently so weakened from the recession, that if there is not an increase in the purchase of equipment, goods, and services, business failures will result.

According to a survey conducted by the supply side of the transit industry, about one-half of the suppliers' business is transit related. But, this trend is down, and people are exiting this type of business due to unpredictable funding and procurement process. An estimated one-half of all suppliers have fewer than 25 employees. Small businesses are one of the areas with the highest percentage in new job creation. An increase in federal funding for transit will translate into new job creation and will help lift our economy out of the recession.

We have a strong national interest in maintaining the economic health of our transit supply industry. Reduced transit funding -- both capital and operating -- threatens the stability and viability of our suppliers and their ability to provide the goods and services needed by the industry to provide transit service. We need a strong transit manufacturing industry to meet the growing needs of transit operators over the long run. A healthy transit manufacturing sector can generate badly needed jobs and help to pull the economy out of the recession.

### **Transit Conserves Energy**

The enhanced use of transit -- increased ridership -- must be part of any viable strategy to move our nation toward energy independence. Transportation is responsible for 63% of U.S. oil consumption, and oil imports are nearly 70% of our annual trade deficit. Transit is an inexpensive way to conserve energy. We estimate that every commuter who switches from driving alone to using transit saves 200 gallons of gasoline per year. If 10% of urban



commuter trips were replaced by transit, more than 300,000 barrels of oil would be saved each day.

Transit's greatest contribution to energy conservation is to provide an alternative to single-occupant vehicle travel, the least energy efficient form of urban transportation. The industry's ability to provide this alternative is strengthened when it can expand services and keep fares low. Actions that force transit to cut services and increase fares will hamper transit's contribution to energy conservation.

### **Transit Reduces Pollution**

The most effective, quickest way to reduce air pollution is to reduce vehicle emissions by convincing people to stop driving to work and to use transit. Higher average vehicle occupancy is the only means of ensuring that the same number of people can reach their destinations without increasing the number of vehicles on the road and, ultimately, the amount of air pollution.

When one person leaves a car at home and decides to commute via transit, 76 fewer pounds of vehicle exhaust pollutants are emitted over the course of one year. Moving people out of cars and into vans, buses, and rail is essential for achieving cleaner air.

Higher funding levels for transit are essential to enabling transit systems to increase ridership. This, in turn, will directly benefit air quality and communities' ability to achieve attainment standards.

Increased federal transit funding will allow the industry to introduce new technology to meet emission standards. Without additional federal support, the costs imposed on transit operators to underwrite new technologies may result in service reductions or fare increases that would send the wrong message to commuters. These actions would make current transit riders go back to driving their automobiles resulting in higher emission travel habits.

### **Transit Will Help the Economy**

Every one million dollars invested in transit creates or maintains sixty direct and indirect jobs. Investment in operations and maintenance are especially productive, resulting in sixty eight jobs per one million dollars expended. Transit also provides essential transportation for other workers. A study by the Delaware Valley Regional Planning Commission, for example, found that shutting down the major transit system in Philadelphia would result in the loss of 175,000 jobs throughout Pennsylvania.

### **Transit Provides Mobility**

Public transit provides essential mobility to citizens who are unable or who choose not to operate private vehicles. For people with disabilities, older Americans, the young, and the poor, access to transit can be the single most important factor in their quality of life and their ability to work, obtain education, and gain access to essential services.

Many senior citizens also depend on transit services. In rural America, nearly half of the elderly are in poor health and 60 percent are not licensed to drive. Expanded public transportation services are vital to provide these people access to essential health care facilities and other social services. The proportion of the population that is elderly will continue to rise, and we expect the demand for these services to expand as well. The number of persons over 65 will grow from nearly 26 million in 1980 to more than 65 million by 2030, and the growth rate in the very elderly population, over 75 years, will be even more

pronounced. Nationally, transportation is the third largest cost item for programs under the older Americans Act.

Mobility is also a concern for low-income people, including workers and students who depend on transit. For people with limited incomes, transit can mean the difference between a decent job and unemployment. Some 28 percent of transit users live in households with annual incomes of less than \$10,000. For most of these people, transit is the only transportation option. Transit is absolutely necessary to expand employment opportunities.

It is also worth noting that greater availability and use of transit services will improve mobility for people who continue to choose to drive. Anything that reduces demand for highway and road capacity will benefit those who remain on the roads.

### **Transit Reduces Congestion**

Travel delays in the Nation's largest urbanized areas (UZAs) now cause two billion hours of time to be lost annually. Over the next 20 years, congestion will increase more than 400 percent on the Nation's freeway systems and over 200 percent on other roads, according to the Federal Highway Administration (FHWA). During this period, annual delay in travel time will increase by 5.6 billion hours. The cost of congestion on urban freeways alone, according to a Transportation Research Board report, will increase to \$50 billion per year by 2005.

Transit provides a low-cost alternative to congestion. The investment costs of transit compare favorably with those of highway construction. Major urban highways can cost \$100-120 million per mile, while busways can be built for \$4-12 million per mile, light rail for \$10-20 million per mile, and heavy rail for costs comparable to or lower than major highways.

Transit can substantially reduce congestion. Every bus full of passengers at rush hour removes at least 40 cars from traffic, every full rail car removes 75-125 cars from traffic, and every van full of passengers removes 13 cars from traffic. One high-occupancy vehicle (HOV) lane carries the same number of people as three regular highway lanes.

## **CONCLUSION**

APTA appreciates the opportunity to provide the new Clinton Administration our policy recommendations on public transit. We stand ready to assist the new Administration in any way. As we say in our industry, TRANSIT MEANS BUSINESS!

### **FINAL REPORT: SURVEY OF ABILITY TO SPEND FEDERAL TRANSIT FUNDS DURING FISCAL YEAR 1993**

#### **SUMMARY OF FINDINGS: Transit Agencies Need and Can Spend \$7 Billion of Additional Federal Funds Creating 405,000 New Jobs During Fiscal Year 1993**

- o Transit agencies can spend \$7 billion dollars in new federal funds during Fiscal Year 1993 if additional federal funds are made available.

- o This is in addition to \$4.8 billion in federal funds currently available to transit agencies from all federal sources during Fiscal Year 1993.
- o The \$7 billion in additional federal funding would result in 405,000 jobs, directly and indirectly.
- o Nearly 40 percent of the needed funds are for transit vehicles to replace over-age buses, vans, and rails cars. The additional \$1.2 billion of federal funds for buses and vans would purchase 8,370 more vehicles. These buses and vans are urgently needed to replace expensive-to-maintain vehicles currently in service and to provide vehicles to meet the requirements of the Americans with Disabilities Act.
- o Full appropriation of the Intermodal Surface Transportation Efficiency Act (ISTEA) authorization for Fiscal Year 1993 would have provided \$1.5 billion of the additional funds transit agencies could spend this year. Full appropriation of ISTEA would also provide an additional \$105 million for research and training, administration of the transit program, and grants to social service agencies.

#### **Transit Agencies Expect to Spend \$4.8 Billion In Currently Available Funds During Fiscal Year 1993**

Transit agencies expect to spend over \$4.8 billion dollars in already available federal funds during Fiscal Year 1993. These expenditures include funds appropriated to the Federal Transit Administration (FTA) for Fiscal Year 1993, carry-over funds from previous years' appropriations that have not yet been obligated, flexible funds from Federal Aid Highways appropriations transferred to transit use in accordance with provisions of the Intermodal Surface Transportation Efficiency Act (ISTEA), and funds from other federal agencies used for transit purposes.

The federal funds will be spent for a variety of purposes. Fifteen percent of the expenditure is planned for operations, 17 percent for new buses and vans, 23 percent for new start fixed-guideway system infrastructure, 17 percent for modernization of existing fixed-guideway systems, 2 percent for new rail cars, 17 percent for other new buildings and facilities, and 10 percent for other capital purposes.

#### **Transit Agencies Need and Can Spend an Additional \$7.0 Billion in Federal Funds During Fiscal Year 1993**

Transit agencies could spend an additional \$7 billion in federal funds during Fiscal Year 1993 for maintenance and operations, to buy capital equipment and build infrastructure, to increase service to meet federal mandates, and provide increased service demanded by growing communities. The funds would be spent for the wide variety of uses shown on Table 1.

TABLE 1: ADDITIONAL FEDERAL FUNDS THAT WOULD BE SPENT IN FISCAL YEAR 1993

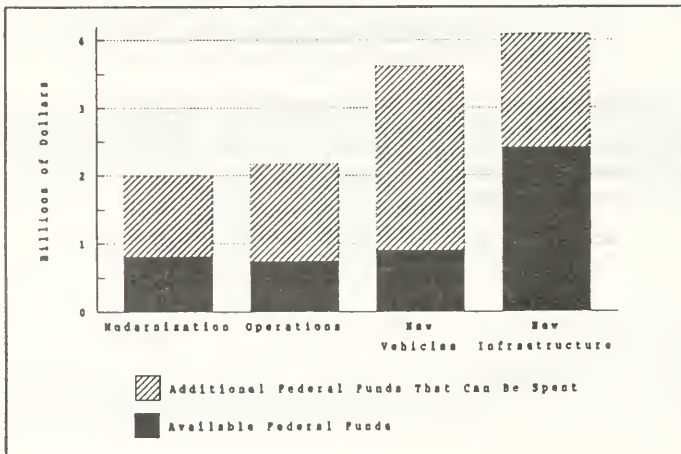
Use of Funds	Amount	Percent of Funds
Operations	\$1.43 billion	20.3 %
Buses and Vans	1.21 billion	17.1 %
Other Vehicles	1.53 billion	21.8 %
Fixed-Guideway Modernization	1.19 billion	17.0 %
New Starts	0.50 billion	7.1 %
Other Facilities	0.88 billion	12.5 %
Other Purposes	0.30 billion	4.2 %
Total	7.04 billion	100.0 %

Funds that can be expended include 20 percent for operations, 39 percent for buses, vans, and rail cars, 17 percent for fixed-guideway modernization, 7 percent for new start fixed-guideway construction, and 17 percent for other capital purposes. This distribution of needs is different from the way federal funds already available are projected to be spent.

A larger percentage of expenditure would be directed toward new vehicles and operations and a smaller percentage for fixed-guideway new starts, other facilities, and other capital purposes. Although this shift reflects in part the needs of transit agencies, it is also a recognition of the purposes for which funds can be most quickly spent. Survey respondents were restricted to reporting only needed federal funds that could be spent by the end of Fiscal Year 1993 or for which contracts for capital projects could be signed and work begun before the end of Fiscal Year 1993.

Figure 1 shows the amount of additional funds that could be expended compared to available funds by use. Transit agencies could spend a total of \$2.0 billion for fixed-guideway modernization, 148 percent more than the amount available from all federal sources. Potential expenditures of \$2.2 billion for operations are 192 percent more than available federal funds, of \$3.6 billion for new vehicles are 305 percent more than available, and of \$4.1 billion for new infrastructure are 70 percent more than available.

FIGURE 1: TRANSIT AGENCY ABILITY TO SPEND ADDITIONAL FUNDS IN FY 1993 COMPARED TO AVAILABLE FEDERAL FUNDS BY USE





### The Additional Spending Would Create 405,000 Jobs

Additional federal funding of \$7 billion would result in an additional 405,000 jobs with each job equal to one person-year of employment. The jobs created include both direct employment by transit agencies and in industries providing goods and services and building infrastructure for transit agencies and indirect jobs resulting from the effects of those expenditures in the economy.

Approximated 58,000 jobs are created for each \$1 billion of transit spending. The number of jobs created by specific use of additional transit spending are shown on Table 2. Investment in operations has the greatest potential for rapid job creation and creating the largest number of jobs. Spending for operations results in 68,000 jobs per \$1 billion while capital investment results in 53,000 to 57,000 jobs per \$1 billion.

The job creation potential of transit projects is estimated by APTA using input-output analysis techniques. Other researchers have described the positive impact of transit investment on the economy. Michael Renner of the Worldwatch Institute has described German studies showing light rail track construction generates up to 64 percent more jobs than highway construction.<sup>1</sup>

The Urban Institute has found that shutting down the Southeastern Pennsylvania Transportation Authority (SEPTA) which employs 9,250 persons would result in a long-term loss of 175,000 jobs throughout Pennsylvania.<sup>2</sup> Economist David Aschauer has found that investment in transit infrastructure has more potential to stimulate long-run economic growth than does highway spending.<sup>3</sup>

TABLE 2: JOBS CREATED BY ADDITIONAL TRANSIT SPENDING IN FY 1993

Use of Funds	Funding In Billions of Dollars	Jobs Per Billion Dollars (a)	Total Jobs Created
Operations	\$ 1.43	68,000	97,300
Buses and Vans	1.21	55,000	66,600
Other Vehicles	1.53	55,000	84,200
Fixed-Guideway Modernization	1.19	54,000	64,300
New Starts	0.50	55,000	27,500
All Other Capital	1.18	55,000	64,900
Total	\$ 7.04	57,500	404,800

(a) Direct and indirect jobs equivalent to one person year of employment.

### An Additional \$2.7 Billion Can Be Spent for Vehicles, \$1.4 Billion for Operations and \$2.9 Billion for Other Capital Needs

The use of additional federal funds would vary between types of transit agencies. Medium size bus systems would use 38 percent of additional funds for operations while larger bus systems, rail systems, and small bus systems would use only 18 to 19 percent of additional funds for operations. Table 3 shows the percent of additional funds needed by purpose for three groups of transit systems.

The first grouping is large bus systems which own or lease 501 or more buses and vans, any system operating only rail cars or ferry boats, and multi-modal systems operating any number of buses and vans plus three or more rail cars, trolley coaches, or

ferry boats. The second group is medium size bus only systems which own or lease 151 to 500 buses and vans. The final group is small bus only systems which own or lease 150 or fewer buses and vans.

TABLE 3: PERCENT OF ADDITIONAL FUNDS NEEDED BY SYSTEM TYPE

Use of Funds	Type of Transit System		
	Multi-Mode, Rail, and Large Bus	Medium Bus Only	Small Bus Only
Operations	18.9 %	37.9 %	18.5 %
Buses and Vans	10.7 %	48.9 %	54.6 %
Other Vehicles	25.5 %	1.9 %	0.9 %
Fixed-Guideway Modernization	19.9 %	0.0 %	0.0 %
New Starts	8.0 %	2.7 %	1.9 %
Other Facilities	12.8 %	4.3 %	17.0 %
Other Capital	4.2 %	4.3 %	7.1 %

The primary need for small and medium size bus systems is for buses and vans. Medium size bus systems would spend 49 percent of additional federal funds for buses and vans, and small bus systems would spend 55 percent for buses and vans. Larger systems would still spend 10 percent of their funds for buses and vans but would devote 26 percent of additional funds to purchasing rail cars and other vehicles. The small percentage of funds designated for "other vehicles" by medium size and small bus systems is for service vehicles such as tow trucks and dispatcher vehicles.

**The Additional Spending Would Buy 8,370 New Buses and Vans;  
Even Including Buses and Vans That Will be Bought With Available  
Funds, 60 Percent of Bus and Van Needs Would Still Go Unmet**

The additional \$1.2 billion that would be spent for buses and vans would purchase approximately 8,370 new vehicles of all sizes. If the number of vehicles by size is in the same proportion as Federal Transit Administration-funded vehicles were in Fiscal Year 1991, the additional funds would provide for 4,110 full size buses of 35 feet or longer, 1,820 small buses of 30 feet or shorter, and 2,440 vans.<sup>4</sup> This number of vehicles also assumes the deferral of state and local matching funds. If state or local matching funds are also included, the number of vehicles would be greater. A larger number of vehicles of any size could, of course, be purchased with a reduction in the number of vehicles of other sizes purchased.

As of January 1, 1992 there were 12,400 full size buses, 2,800 smaller buses, and 4,400 vans being operated that were older than their economically useful lives as defined by the Federal Transit Administration. Over age vehicles are not reliable, are expensive to maintain, and because they are expensive to maintain are used only when necessary while new vehicles are intensively used and wear out more quickly than necessary. New vehicles that meet the requirements of the Americans with Disabilities Act and The Clean Air Act increase mobility for the transit dependent and reduce air polluting emissions. APTA estimates that transit systems will also need up to 7,500 more vans and small buses to meet new mobility requirements recently mandated by the Americans with Disabilities Act.

Approximately 3,500 buses and vans are expected to be ordered in Fiscal Year 1993 with already-available funds. Even if those vehicles are added to the 8,370 that

would be bought with additional funds, less than 40 percent of the buses and vans needed to meet ADA mandates, replace over age vehicles, and replace vehicles that will exceed their economic life this year will be purchased. The \$1.2 billion additional funds for buses and vans is only a portion of the funds needed to bring America's bus and van fleets to acceptable standards.

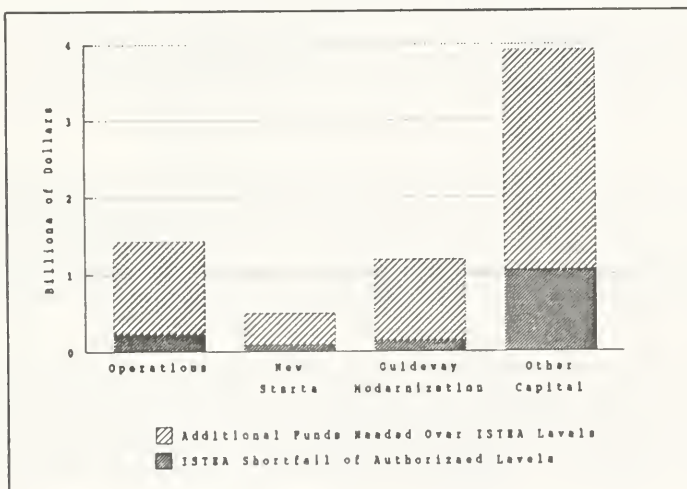
These numbers exclude a portion of vans needed for use by social service or other agencies eligible for Federal Transit Act Section 16(b) funding for elderly and disabled special services. On average over the past six years, the Federal Transit Administration has funded 1,400 to 1,500 of those vehicles. Because a very limited number of these agencies are APTA members, funds and vehicles for their use are not fully included in this projection. Full appropriation of the Fiscal Year 1993 authorization of the transit program--as proposed by APTA--would provide funds for an additional 650 vans for Section 16(b) service providers beyond those included in this report.

### Full Funding of ISTEA Would Provide \$1.5 Billion of Additional Funds for Transit Agencies

Transit appropriations in Fiscal Year 1993 were \$1.6 billion less than the amount authorized by the Intermodal Surface Transportation Efficiency Act. Of that amount, \$1.5 billion is authorized for transit system uses and \$100 million is for research and training, Federal Transit Administration operations, and vehicles for social service agencies. APTA supports full appropriation of ISTEA as an essential goal in federal support of transit. Even if, however, ISTEA were appropriated at fully authorized levels, transit agencies would still be able to spend an additional \$5.5 billion during Fiscal Year 1993 to create jobs and improve America's infrastructure.

Figure 2 shows the uses of additional funds from a fully appropriated ISTEA and the additional amount transit systems could spend beyond full appropriation of ISTEA. The additional \$231 million that would be available for operations from full appropriation of ISTEA is 16 percent of the amount that can be spent, \$90 million for new starts is 18 percent of the amount that can be spent, \$146 million for fixed-guideway modernization is 12 percent of the amount that can be spent, and \$1 billion for other uses is 27 percent of the amount that can be spent.

FIGURE 2: PORTION OF ADDITIONAL SPENDABLE FUNDS THAT WOULD BE PROVIDED BY FULL APPROPRIATION OF ISTEA IN FISCAL YEAR 1993



### **Survey Results Are Estimated From Data From 113 APTA Members Operating 69 Percent of Transit Vehicles**

The amounts reported for transit systems' ability to spend additional funds in Fiscal Year 1993 are based on responses by APTA members to a survey distributed at the end of October 1992. The survey asked each participant to identify (1) the amount of existing federal funds they anticipate spending in Fiscal Year 1993, i.e., amounts already apportioned or earmarked for their use and other funds they expect to receive from successful grant applications; and (2) of additional funds they could spend in Fiscal Year 1993. The local match for additional funds was assumed to be waived for capital uses for at least two years but not waived for funds used for operations. Spending was defined as the actual outlay of operating funds and the signing of contracts or other instruments of obligation for capital funds that would allow contractors to commence work and create jobs.

Responses were received from 113 APTA member participants. Responses were solicited from all of the largest multi-modal transit systems and from a sample of other systems. The responding systems own and lease 69 percent of all transit vehicles operated by APTA members. APTA-member transit systems provide approximately 97 percent of all U.S. transit service.

Data from respondents was expanded to estimated totals for all transit systems in five categories of systems in order to account for the variation in needs between types of transit systems identified by vehicle mode and size. Those categories were (1) very large multi-modal transit systems where data was obtained from all identified transit systems, (2) other multi-modal and all rail-only systems, (3) large bus and van only transit systems, (4) medium size bus and van only transit systems, and (5) small bus and van only transit systems.

Information was also requested in an open ended format about any impediments transit systems face in spending federal funds that result from federal regulations or procedures and what the effect is on their system of the 14 percent reduction in transit formula fund appropriations in Fiscal Year 1993 contrasted to Fiscal Year 1992.

### **These Survey Results Are Consistent With Studies of Long-Term Transit Needs**

This survey identified \$4.8 billion in federal funds that transit systems anticipate spending in Fiscal Year 1993 plus \$7 billion in additional federal funds that could be spent for a total of \$11.8 billion dollars in federal funds that could potentially be spent. This amount of federal funds that transit systems report they can spend in Fiscal Year 1993 is consistent with other estimates of transit system funding needs.

An APTA proposal for reauthorization of federal transit legislation called for eventual program growth to \$11 billion in 1991 dollars.<sup>5</sup> In 1993 dollars this amount would be approximately \$11.9 billion, almost the exact amount predicted by the Ability to Spend Survey. The proposed level of \$11.0 billion in 1991 dollars was based on a model of investment required for long-term nationwide growth in transit ridership to levels achieved in the most transit intensive U.S. and Canadian cities with ridership goals stratified by population size.

An APTA survey of long-term investment needs in mid-1991 projected an average need for \$15 billion in capital funds from all sources over the following six years.<sup>6</sup> With standard capital grant matching ratios of 80 percent of funds from the federal government and 20 percent from state and local governments, this is an average need for \$12 billion in federal capital funds. The Ability to Spend Survey estimates transit systems can spend



a total of \$9.7 billion in federal capital funds in Fiscal Year 1993 out of the total \$11.8 billion, somewhat less than the average long-term need.

The U.S. Department of Transportation has issued several studies that support transit's needs for funds for specific uses. The Office of The Secretary estimated that the additional annual cost of compliance with provisions of the Americans with Disabilities Act is up to \$628 million for operations and \$310 for vehicles and capital improvements.<sup>7</sup> The Federal Transit Administration estimates that on average \$1.7 billion (1991 dollars) will be needed annually for fixed guideway modernization over the next decade.<sup>8</sup> In 1993 dollars this amount would be approximately \$1.9 billion, slightly less than the \$2 billion transit systems report they would be able to spend in Fiscal Year 1993. The FTA study does not, however, include relatively smaller fixed-guideway operations in 10 urbanized areas that received fixed-guideway apportionments from Fiscal Year 1993 appropriations.

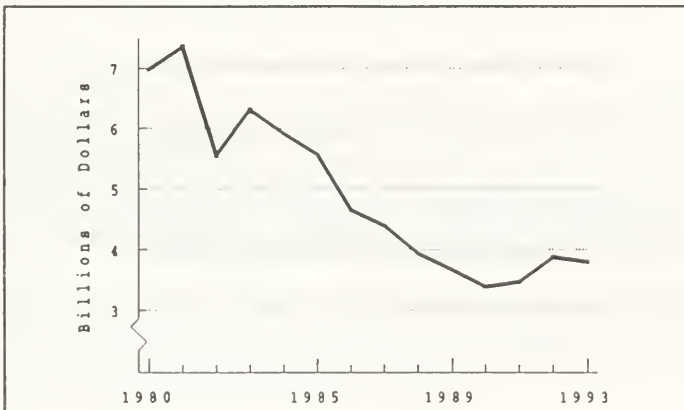
The Federal Transit Administration has estimated a need for over \$10 billion in federal funds to complete new start fixed-guideway projects that had advanced to at least the alternatives analysis stage.<sup>9</sup> Only a portion of this amount can be spent immediately, however, dependent upon the stage of development of individual projects, because of the large scale and complex nature of their construction. The Ability to Spend Survey projection that transit systems can spend \$1.6 billion in Fiscal Year 1993 indicates a reasonable six plus year average to complete all listed projects.

### Federal Transit Funding Has Declined Substantially in Past 12 Years

Federal funding for transit has declined significantly over the past 12 years. Measured in today's dollars, the Fiscal Year 1981 federal transit program of \$4.6 billion has a value of \$7.4 billion. As shown on Figure 3, the value of the program measured in 1992 dollars declined to \$3.4 billion in Fiscal Year 1990 and has only returned to \$3.8 billion in Fiscal Year 1993. The real value of the federal transit program is now only 52 percent of its value in Fiscal Year 1981.

The decline in the real value of federal operating assistance has been even greater. Operating assistance for urbanized areas in Fiscal Year 1980 was \$1.1 billion which would have a real worth of nearly \$1.9 billion in 1992 dollars. The actual limit on operating assistance in Fiscal Year 1993 is \$802 million, a decline to 43 percent of the real value of operating assistance since Fiscal Year 1980. In 1980, federal assistance from all programs represented nearly 17 percent of all transit operating funds while in 1991, federal assistance accounted for less than six percent of transit operating dollars.

FIGURE 3: REAL VALUE OF FEDERAL TRANSIT FUNDING IN 1992 DOLLARS



### **Fiscal Year 1993 Reductions in Federal Formula Funds Have Hurt Many Transit Agencies**

Survey participants were asked in an open ended question to describe the effects they are experiencing from the 14 percent reduction of federal formula funds in Fiscal Year 1993, contrasted to Fiscal Year 1992. Respondents reported problems in both operating and capital financing, compounded by the costs of new federal mandates of the Clean Air Act and the Americans with Disabilities Act.

Difficulties financing capital purchases, especially regular bus and van purchases, were the most frequently cited negative effect. Inadequate funding for replacement and expansion of bus and van fleets will cause difficulty in implementing service to comply with the Americans with Disabilities Act and the Clean Air Act. Without the ability to buy new buses many communities will not be able to meet increased demands for service, forcing potential riders to continue to depend upon expensive private transportation. The gradual decline transit systems are experiencing in their ability to replace worn out equipment or expand service is the same situation that forced private operators out of business in the 1950s and 60s. The continued use of old vehicles increases maintenance costs and causes service to become less reliable and less safe, a vicious cycle that discourages ridership and increases future costs to pay for today's mistakes.

Capital improvement budgets also are being strained. Facilities cannot be improved to take advantage of technological improvements. New communication systems that improve the efficiency of operations, fare collection system improvements, and automation are being deferred by many systems. Lack of capital investment reduces the potential for productivity improvements in transit system operations.

Lack of growth in federal operating funds is forcing many transit systems to increase fares, increase local financial assistance, or reduce service. Fare increases and service reductions are, of course, counterproductive and increase the cost to individuals and local governments. Even transit systems that are able to get by without reducing service or raising fares are making cuts in other activities such as training and advertising. Although hidden, these cuts have a serious, long-term effects because the quality of employee performance can deteriorate without training and a system's market share can drop if the public is not aware of services offered.

Many transit systems that are fortunate enough not to be affected this year noted that continued low levels of federal funding will affect them next year. Systems making up operating funds from reserves will use up their reserves and be forced to find funds from other sources or cut service. Almost all respondents have experienced or expect a negative effect from the reductions in federal formula funds.

### **Other Federal Actions Could Speed Up Spending**

Rapid spending of increased federal funding by transit systems would be much easier if a number of activities that are now viewed as impeding the process are modified. Respondents were asked to identify changes in current federal regulations and procedures that would aid them in the rapid spending of the additional federal funds they need. Their responses resembled a check list of nearly all federal regulations and procedures that applied to transit. One respondent noted that all federal regulations impede spending. The following list summarizes recurring responses:

- o Required approval of local Transportation Improvement Programs at the state level.
- o Failure of the Federal Transit Administration to fully implement the Like-Kind Bus Program.

- o Delays by regional Federal Transit Administration staff in processing grant requests. Some systems suggest this is due to a lack of an adequate size staff in Federal Transit Administration regional offices.
- o Routine Federal Transit Administration revisions of requirements for a grant application. The Federal Transit Administration does not have clearly defined procedures for grant applications. Unclear procedures result in requests for additional material that seriously delay the grant process.
- o Slowness of the grant amendment process and requiring amendments when only simple changes in a grant are required.
- o Spare ratio requirement prevents acquisition of new buses without first retiring existing buses.
- o New pre-award/post-delivery audits are extremely complicated and time consuming.
- o Department of Labor delay in review and approval of 13(c) agreements that have been signed and approved by all parties.
- o The application of Buy America requirements to all purchases.
- o Slow processing of Letter Of No Prejudice requests.
- o Federal Transit Administration policy of releasing funds on a quarterly cycle delays funds that are ready to go before the end of a quarter.
- o Bus testing for medium and small buses is an excessive expense and delays procurement.

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## TRANSPORTATION MANUFACTURING CORPORATION

STATEMENT OF EUGENE F. TUNILA, GROUP EXECUTIVE VICE  
PRESIDENT, NORTH AMERICAN TRANSIT BUS

Transportation represents 18% of the Gross National Product, accounts for 27% of all the energy we use, and of the energy transportation uses, 97% is petroleum based. Transportation is certainly a key area for stimulating the U.S. economy.

Our country is faced with increasing gridlock, decreasing petroleum reserves and an exodus of jobs to foreign countries (which in turn devastates "the American Dream" of upward mobility toward more productive and rewarding employment. It is an appropriate time to take actions that will satisfy a multitude of objectives for each action taken. TMC is not professing to have the solutions to our national problems but it does have appropriate suggestions relative to the transit industry that will help create jobs, reduce transit capital costs 20%, increase exports, minimize imports, achieve cleaner air sooner, and conserve energy.

TMC requests that the following ideas be explored with the President/Vice President-Elect Transition Team:

- I. Short Term - Immediate Impact  
Market Stimulus for Jobs Creation
  - A. Provide a temporary (12-month) reduction of state and local capital equipment cost share from 20% to 10% (same as currently provided for ADA & CAA compliance). Qualification should require retirement of oldest buses (pollution generating), air compliance plan filed and actions in progress, spare ratio within federal guidelines, trade-in of non-wheelchair lift equipped units, etc.
  - B. Buy America increased from 60% content to 80% to create jobs in America.
  - C. Encourage bus purchase compliance with the federal "Advanced Design Bus Standard" through meaningful incentives such as 95 to 100% federal funding for ADB standard purchases but continue current 80% funding for customized specifications (exclusive of R&D projects) that deviate from/exceed the ADB standards. Lower cost, shorter delivery lead times and standardization in the industry on proven components will result.
  - D. Provide additional training funds in new technologies - ADA and alternate fuels.
  - E. Tie foreign aid to purchase of U.S. goods for the benefit of aided countries' infrastructure (see letter dated May 6, 1991, sent to Senator Claiborne Pell, Chairman of the Senate Foreign Relations Committee, and others).
  - F. Provide funding for remanufacturing used buses for use within U.S. in suburban and rural areas, as well as export. Advantages: remanufacturing is quite labor intensive thereby providing jobs, and would provide needed transport service in suburban and rural areas at lower capital equipment costs. Can also be tied in with Item E. above.



- G. Provide development funding for EPA and ADA mandated specifications. U.S. transit manufacturers do not export to Canada or Mexico. One third of U.S. transit buses are imported from Canada to U.S. The Canadian manufacturers have an unfair advantage because we are not on a level "playing field". In Canada, up to 70% of all R&D is funded by provincial and/or federal Canadian government, whereas in the U.S., there are no federal funds provided for research and development in the transit industry.
- H. Mandate 60% of the transit fleet to be EPA compliant (1992 standards) by 1996 -- with either retrofit engines or new/remanufactured bus purchases.
- I. Prohibit larger cities from incorporating local content provisions and evaluation factors as part of their procurement practices. This practice is exercised only when 100% local funds are utilized for the transaction. The 100% local funds is a misnomer as federal assistance in other unrelated projects, e.g. highways, has freed up local funds to be applied to 100% local financed projects. We believe the whole process needs to be revisited and that local content provisions should be deleted from all transit transactions.

## II. Simultaneous Actions with Long-Term Benefits of Lower Transit Costs and FTA funding requirements.

- A. Accelerate fuel cell project and refocus alternate fuel strategy. Ethanol/methanol/LNG/CNG/trolley/ dual fuel/diesel/battery is too much proliferation for the industry to engineer adequately. The strategy should be redirected to a fuel and infrastructure that will be useable when the fuel cell technology is available. Use of alternate fuels does not represent a technological breakthrough and is a short-term solution with long-term redundancy. Certain alternative fuels are a waste of valuable resources and dollars! It is an opportune time to mobilize our capital and technological resources to focus on the fuel cell success.
- B. Re-establish White Book to reflect latest technology and tie in with I.C. We must focus on transporting people in the most cost-efficient manner relative to life-cycle costs.
- C. Emphasize the purchase of value in terms of remanufacturability of buses to support Items I.-E. and I.-F above. Eliminate the throw-away bus concept and product degradation created by low bid procurement at any cost (life cycle cost).
- D. Integrate major city buses into multi-purpose vehicles and replace the unsafe school bus concept which has "throw-away" vehicles, as well as generally inexperienced drivers. Benefits are safety, environmental, resources, as well as off-peak utilization of equipment and reduced government spending. Excess school buses can be stored for national emergencies, e.g. Hurricane Andrew, unplanned military troop movements, National Guard vehicles, etc.
- E. Convert and utilize used transit or school buses into portable classrooms for trade skill training in impoverished school districts, e.g. cosmetology, barbering, truck driving, chauffeuring, assembly, blueprint

reading, bill of material structures, inventory management, computer skills, etc.

- F. Create incentives, i.e. HOV lanes and parking lot construction, corporate incentives for employees(ers) on transit travel, upgraded "suburban" coaches for park and ride, as well as free transport (based on income level) from inner city to job sites, (similar to food stamps, except work stamps).
- G. Financial caps on attorneys' fees for malpractice/negligence suits.
- H. Universal/realistic approach to workers compensation and medical costs.
- I. Weight studies for transit vehicles - part of new materials and structure technology (26,000 lb. vehicle to transport 12,000 lbs. of cargo).
- J. Allow accelerated depreciation on transit buses rather than straight line so that trade-ins of buses can occur without penalty. Cleaner air sooner, buses diverted to secondary and tertiary uses, equipment utilization and reduced operating costs.
- K. In conjunction with I.A., II.J., and III.A., a re-evaluation of operating fund assistance (50% federally funded) and new bus purchases (80-90% federally funded) can be directed to reduce operating assistance levels and increase new bus purchases which could result in an income neutral situation to the federal government but accomplish cleaner air sooner, and better service in suburban and rural areas through remanufactured or used buses.
- L. Eliminate autos from central cities - create mini hub and spokes created from parking centers on designated high density routes. Minimal or no fare charge, minimal seating, short runs.

### III. Long Term - Reduced Transit Costs with Increased Service Levels

- A. Streamline procurement process (Refer to Attachment D for recent speech on Procurement and Industry Status)
  - Standardize contract language, warranties, product specifications, and quality and inspection standards
  - Certified procurement inspectors
  - Specify performance specifications, not brand names
  - Industry-wide data book (Update ADB/White Book standard)
  - Refer to Attachment C for an example of warranty creep - conversion of operating funds (50% federally funded) to capital funds (80% federally funded)
- B. R & D programs on:
  - Bridge law technologies
    - Lightweight components
    - Lightweight structural concepts and materials
  - Low floor technologies
  - Driveline technologies

- Ancillary industry component application (Heavy duty Class 7 & 8 trucks)
- Technology transfer programs from national laboratories
- R & D on components should not only be oriented to advanced technology, but also creating competition. At present, seven major vendors comprise 80% of the material costs with little or no competition. (Refer to attached letter dated August 28, 1992, to the Department of Justice, Exhibit B).

It is TMC's belief that in a predominately low bid industry, transit buses cost 20% more than they should. We would appreciate the opportunity to correct this and help provide cleaner air, better service, reduced operating costs, more jobs, and energy conservation, while achieving an income-neutral impact on the federal budget over the life of ISTEA.

[EXHIBIT A]

### LETTER FROM E.F. TUNILA

May 6, 1991

The Honorable Claiborne Pell, Chairman  
Senate Foreign Relations Committee  
446 Dirksen Senate Office Bldg.  
Washington, D.C. 20510-6225

Dear Senator Pell:

On a recent trip to the Philippine Islands, I was moved by the visible poverty that exists in that beautiful country. This is certainly not an unusual sight in any emerging country.

The thought occurred to me, as a businessman, that some strings should be attached to our foreign aid/investment to substantially help the people whom the funds are intended to assist. One way to accomplish this is to tie the aid to such things as the construction of facilities and to items that generate jobs and trade. Not only would this produce income for the foreign country, but it would also be long-lasting. The country and its people would become more self-supporting and eventually achieve the status of an emergent nation.

Although this may be self-serving, I believe that our foreign aid funds must be directly tied to the purchase of American products and services, i.e., "Buy America", and then only in areas that would provide opportunities for job creation and exports in both countries. In addition, tying such aid to the purchase of American products and services would be a constant reminder of America's participation in that country's welfare. Of course, there will always be circumstances that preclude or override this criteria, e.g., natural disasters, other emergencies and our global interests.

I would further suggest that part of the aid be targeted to the country's infrastructure, primarily transportation, such as roads and rails. In an emerging country, an effective transportation network is necessary, just as it was when our country was emerging. The transportation network would be a daily reminder of U. S. technology and support.

The benefits of exports are self-evident as well as the ancillary benefits mentioned previously. In addition, exporting U. S. goods would allow U. S. manufacturers a more stable volume base to become more competitive against the off-shore triumvirate of

other countries (industry, government and financial institutions) that currently results in a competitive advantage which we cannot presently match.

In order to obtain a foothold, I propose the following:

- o A portion of foreign aid should be allocated to the transportation network of that country;
- o "Buy America" should be incorporated into the funding;
- o Target countries should be established as a springboard for further exports of U. S. goods and services;
- o Initial "Buy America" should be complete turnkey and/or product; and
- o Subsequent in-country expansion should incorporate less dependence on "Buy America" through licensee arrangements and/or direct private investment for manufacturers within the country receiving assistance.

Thank you for your consideration and hopefully, your support. Your thoughts on this issue would certainly be appreciated.

Sincerely,

E. F. Tunila  
Group Executive Vice President - North American Transit

EFT/cs

cc: See attached listing

cc:

The Honorable Jesse Helms, Ranking Minority Member  
Senate Foreign Relations Committee

The Honorable Dante Fascell, Chairman  
House Foreign Affairs Committee

The Honorable William Broomfield, Ranking Minority Member  
House Foreign Affairs Committee

The Honorable David Boren  
House Foreign Affairs Committee

Mr. Samuel K. Skinner, Secretary  
Department of Transportation

Mr. Mark L. Edelman, Administrator  
Department of State

The Honorable Jeff Bingaman  
New Mexico Delegation

The Honorable Pete Domenici  
New Mexico Delegation



The Honorable Bill Richardson  
New Mexico Delegation

The Honorable Steve Schiff  
New Mexico Delegation

The Honorable Joe Skeen  
New Mexico Delegation

The Honorable George Mitchell, Majority Leader  
Senate Committee on Environment and Public Works

The Honorable Wendall Ford, Majority Whip  
Senate Committee on Environment and Public Works

The Honorable Robert Dole, Minority Leader  
Senate Committee on Environment and Public Works

The Honorable Alan Simpson, Minority Whip  
Senate Committee on Environment and Public Works

[EXHIBIT B]

LETTER FROM E.F. TUNILA

Mr. Charles A. James  
Acting Assistant Attorney General  
for Anti-Trust  
Department of Justice, Room 3101  
10th Street and Constitution Avenue, N.W.  
Washington, DC 20580


August 28, 1992

Dear Mr. James:

Attached are releases from Allison Transmission Division and Prodigy Services Company, which indicate that ZF Friedrichshafen AG is going to purchase the Allison Transmission Division of General Motors. The Allison transmission is the preferred choice of many transit authorities and enjoys over 70% market share with Voith offering minimal competition and ZF growing. The proposed sale, in my view, is disastrous to the transit industry in that it would, in the long term, result in higher transit prices due to no or minimal competition. I am submitting a similar letter to the Secretary of Transportation, the Federal Trade Commission and the New Mexico Congressional delegation. I am soliciting your support in eliminating this proposed restraint of trade.

Thank you.

Sincerely,

  
Eugene F. Tunila  
Group Executive Vice President  
North American Bus

EFT:zw  
Enclosures



GENERAL MOTORS CORPORATION  
General Motors Building, Detroit, Michigan 48202

NEWS

**For Release** NOON, EDT, AUGUST 25, 1992

INDIANAPOLIS -- As part of its continuing strategy to focus on its core business activities, General Motors announced today that it has agreed to sell its Allison Transmission Division to ZF Friedrichshafen AG.

Allison Transmission (ATD), located in Indianapolis, Indiana, produces automatic transmissions for trucks, buses, off-highway and military vehicles. ATD employs approximately 5,000 people.

The sale is subject to approval by the U.S. and German governments and is expected to be completed later this year. Terms of the agreement were not disclosed.

"As GM said earlier this year, the sale of Allison Transmission is based on our decision to concentrate our efforts on improving the competitiveness of GM's core business operations," said Lloyd E. Reuss, GM executive vice president. "This sale will allow Allison Transmission to continue providing superior products and service to its customers worldwide, including governments that rely on its defense products." Reuss said GM will continue to rely upon Allison Transmission as a supplier of products to GM.

ZF, headquartered in Friedrichshafen, Germany, is an international manufacturer specializing in transmission, steering and suspension products.

"ZF is delighted to be able to acquire such an outstanding firm as Allison Transmission," said Dr. Klaus Bleyer, chief executive officer of ZF. "This transaction promotes ZF's long-term strategy of providing world-class powertrain products to a global customer base.

"We are committed to Allison Transmission, and its employees, distributors, customers and suppliers," commented Dr. Bleyer. "ZF will maintain the present management team and workforce at Allison Transmission, and we will continue to manufacture Allison products in Indianapolis. In addition, ZF will make ongoing investments in improving Allison's existing products and developing new products."

ZF had worldwide revenues of about \$3.8 billion in 1991 and employs some 33,000 people in 49 countries. The company operates 27 manufacturing facilities, including seven in Germany, and has engineering, production, sales and service operations located in Georgia, Illinois, Maine and Michigan. ZF transmissions are used in many consumer and commercial applications in the United States and abroad. ZF also supplies a number of products to the U.S. Army, Navy, Air Force and Coast Guard.

Commenting on the GM announcement, Allison Transmission General Manager Robert M. Clark said, "We're extremely proud of our Allison team and business record. ZF's international presence and its focus on the transmission business will accelerate Allison Transmission's global growth. We believe this association with ZF will provide both security to our employees and increased value to our customers and business partners."

Allison Transmission does not manufacture any classified U.S. defense products.

Contacts: Charles Licari, GM Corporation (317) 242-6066  
 Patzetta Trice, Allison Transmission (317) 242-2615  
 Richard Moore, ZF (708) 634-3500

# # #

## ALLISON TRANSMISSION FACT SHEET

### BRIEF HISTORY

- o 1915 - Founded by James A. Allison as the Indianapolis Speedway Team Company
- o 1929 - Purchased by General Motors becoming the Allison Division
- o 1949 - Delivery of the first military transmission
- o 1955 - Produced the first heavy-duty, fully automatic automatic transmissions for highway vehicles
- o 1970 - GM merges Allison with Detroit Diesel naming the division Detroit Diesel Allison
- o 1983 - GM separates gas turbine portion of Detroit Diesel Allison naming it the Allison Gas Turbine Division
- o December, 1987 - Roger Penske purchases the diesel engine portion of Detroit Diesel Allison; GM grants the transmission business divisional status, naming it Allison Transmission Division
- o January 14, 1992 - GM announces the intent to seek a buyer for Allison Transmission Division

### FACILITIES:

- o Six plants; 3.9 million square feet
- o Location - Indianapolis, Indiana

### WORKFORCE:

5,000-Total  
 3,495 Hourly  
 1,505 Salaried (including 150 overseas)

**DISTRIBUTION SYSTEM:**

1,737 Distributors and Service Dealers Worldwide

**1991 Sales:**

Approximately \$850 million, with over 70% of those representing commercial products and \$130 million representing export sales.

**PRODUCTS & APPLICATIONS****Models:**

Commercial On-highway: AT500, MT600 and HT700 Series, CLT series,  
WT Models: AD, MD and IID Series

Commercial Off-highway: CRT5000; CLT3000; CLBT5 & 6000; CLBT 9000 and DP8000; and industrial Torque converters

Military: X1100, X200, TX100, and XTG411

**Typical Applications:**

Commercial - Pickup and delivery (P&D), utility, beverage, motor home, lease/rental, fire, municipal, dump, mini-midi bus, farm, fire, haulers, and refuse trucks, oil field, logging, mining, and transit coaches and buses

Military: Main Battle Tank, Armored Personnel Carriers, Self-propelled howitzers, recovery vehicles, infantry fighting vehicles, and medium and heavy tactical vehicles (trucks)

**INTERNATIONAL OPERATIONS:**

- o Represented in 81 countries
- o 7 Licensees: China, England, India, Italy, Spain, South Korea, Turkey
- o 1 Joint Venture: Japan
- o 3 International Business Segments: Europe, Asia/Pacific, The Americas
- o Factory Parts Warehouses: Indianapolis, Belgium, Brazil, Singapore

**ZF FRIEDRICHSHAFEN AG****FACT SHEET****BRIEF HISTORY**

- o 1915 - Founded by Luftschiffbau Zeppelin GmbH and Max Zahnradfabrik Friedrichshafen GmbH
- o 1918 - Start of production of transmissions for automotive applications
- o 1932 - Start of activities in steering technology applications and in 1937 foundation of ZF Schwabisch Gmünd (production volume 1991: 2.3 million steering systems)
- o 1943 - Founded Passau facilities (today, production of transmissions and axles for construction and agricultural machinery)
- o 1959 - Founded ZF do Brasil in São Paulo (1991 workforce: 3,000)
- o 1961 - Development of a fully automatic transmission for passenger cars
- o 1970 - Founded ZF Getriebe GmbH in Saarbrücken (production of automatic transmissions for passenger cars and light commercial vehicles)
- o 1977 - Start of production of automatic transmissions for commercial vehicles (Ecomat series)
- o 1979 - Founded ZF North America in Northbrook, Illinois
- o 1984 - Majority holding acquired in the Lemforder Group
- o 1989 - ZF sales are more than 6 Billion GM for the first time
- o 1991 - Takeover of former 'IFA-Getriebewerk Brandenburg' (production of mechanical transmissions for passenger cars and light commercial vehicles)

**FACILITIES:**

o 27 plants (17 in Europe, 5 in U.S.)  
4 in South America, 1 in Asia

**WORKFORCE:**

33,200 Total  
1,600 Trainee

**DISTRIBUTION SYSTEM:**

Distribution and service network with a workforce of 2,700 in 400 locations worldwide

o Headquarters: Friedrichshafen, Germany  
Main divisions: Friedrichshafen, Saarbrücken, Passau, Schwabisch Gmünd, Lemförde (all in Germany), North and South America

**1991 SALES:**

\$3.8 billion Total, of which  
\$125 million in U.S.



PRODUCTS AND APPLICATIONS:

o This list has been restricted to include only commercial vehicle transmissions

<u>Models</u>	<u>Typical Applications</u>
ECOLITE series	manual transmissions for all possible applications in light,
ECOMID series	medium and heavy commercial vehicles, special vehicles and buses
ECOSPLIT series	and semi-automatic transmissions for buses
ECOMAT series	automatic transmissions for all applications in city buses, transit coaches and buses, trucks, municipal vehicles and special vehicles

INTERNATIONAL OPERATIONS:

- o Represented in 86 countries
- o 20 Sales and Service Companies in 20 different countries with approx. 400 locations
- o 58 Licensees in 24 countries all over the world
- o Cooperations and Joint Ventures with 33 companies in 12 countries

GM Sells Allison Transmission Unit

General Motors said Tuesday it has agreed to sell its Allison Transmission subsidiary, which makes transmissions for heavy-duty trucks, to ZF Friedrichshafen AG of Germany.

The sale is subject to approval of the US and German governments and is expected to be completed later this year, GM says.

Terms weren't disclosed.

Allison Transmission was put up for sale in January. GM says it wants to concentrate on healing its money-losing car business.

Continued [NEXT]

"As GM said earlier this year, the sale of Allison Transmission is based on our decision to concentrate our efforts on improving the competitiveness of GM's core business operations," Lloyd Reuss, GM executive vice president, says.

Reuss says GM will continue to rely on Allison Transmission to supply products to GM.

ZF, headquartered in Friedrichshafen, Germany, is an international manufacturer specializing in transmission, steering and suspension products.

Continued [NEXT]

"This transaction promotes ZF's long-term strategy of providing world-class powertrain products to a global customer base," says Klaus Bleyer, ZF CEO.

Bleyer says ZF will retain Allison's present management team and workers and will continue to manufacture its products in Indianapolis, Ind.

Allison Transmission employs about 5000 people in Indianapolis. It produces automatic transmissions for trucks, buses, off-highway and military vehicles.

Continued [NEXT]

ZF had worldwide sales of about \$3.8 billion in 1991 and employs 33,000 people in 49 countries.

GM also put up for sale another Indianapolis-based division, Allison Gas Turbine, but has had trouble finding a buyer, the Indianapolis Star reports Tuesday.

GM has rejected bids for Allison Gas Turbine, a maker of aircraft engines. Analysts say GM may be expecting a price

reflecting the unit's potential, while would-be buyers are looking at its current performance.

"It's a classic battle of buyer versus seller," says Mark Bobbi, an aerospace analyst with Forecast Intl.

Continued [NEXT]

The Gas Turbine unit has relied heavily on military contracts. But in the past few years, it began to diversify into commercial markets. The division is developing new aircraft engines aimed at regional airlines and for business aircraft. However, the big payoff for those efforts is still a few years off.

GM informed Gas Turbine employees late last week of the rejections. The automaker says it still intends to sell the unit for the same reason it's selling Allison Transmission.

[EXHIBIT C]

# MEMORANDUM

TO: BILL CHADDOCK  
CHAIRMAN, ASSOCIATE MEMBER BOARD OF GOVERNORS  
AMERICAN PUBLIC TRANSIT ASSOCIATION

FROM: GENE TUNILA  
CO-CHAIRMAN, AMBG PROCUREMENT COMMITTEE

DATE: DECEMBER 3, 1992

SUBJECT: FTA WARRANTY POLICY

Following is the viewpoint of our AMBG Procurement Committee relative to the draft warranty levels recommended:

- Refer to Attachment "A" for OEM warranties provided for by various major suppliers.

Another area of concern is the Fleet Defect provision which needs clarification. (Refer to Proposed Fleet Defect Clarification attached). Some properties are applying the 20% fleet defect rule to systems rather than components which creates all types of ambiguous contentious situations relative to the definition of a system. Another item on fleet defects is the potential for "Evergreen" warranty whereby warranty coverage is extended potentially for the life of the bus if repetitive failures occur within the extended warranty period rather than during the standard warranty period. In effect, on a five-year extended warranty, the fleet defect is 4%, not 20% as intended.

We raise our concerns on FTA policy and look forward to the conclusion of this matter.

  
Gene Tunila

Attachments

## ATTACHMENT "A"

PRODUCT	SUPPLIER	STANDARD WARRANTY TERMS	FTA PROPOSED
Engine	Cummins	2 yrs/200,000 mi.*	2 yrs/200,000 mi.
Engine	DDC	2 yrs/200,000 mi.*	2 yrs/200,000 mi.
Transmission	Allison	2 yrs/100,000 mi.	2 yrs/100,000 mi.
Transmission	ZF	2 yrs/unlimited mi.	2 yrs/100,000 mi.
Drive Axle	Rockwell	2 yrs/100,000 mi.	2 yrs/100,000 mi.
Drive Axle	Dana	2 yrs/unlimited mi.	2 yrs/100,000 mi.
Brake	Rockwell	2 yrs/50,000 mi.	2 yrs/50,000 mi.
Air Conditioner	Carrier	2 yrs/unlimited mi.	2 yrs/unlimited mi.
Air Conditioner	Thermo King	2 yrs/unlimited mi.	2 yrs/unlimited mi.
Body	TMC	3 yrs/150,000 mi.	3 yrs/150,000 mi.
Structural corrosion	TMC	7 yrs/350,000 mi.	7 yrs/350,000 mi.
Steering gear	R. H. Sheppard	11 yrs/100,000 mi.	N/A
Radiator	Modine	2 yrs/unlimited mi.	N/A
Compressors	Bendix	2 yrs/unlimited mi.	N/A
Seats	American Seating	1 yr/unlimited mi.	N/A
Pumps	E. G. Rotron	2 yrs/unlimited mi.	N/A
Doors	Vapor	1 yr/unlimited mi.	N/A

\*Cummins has certain warranty limitations such as: injectors, turbo, etc.

### "PROPOSED FLEET DEFECT CLARIFICATION"

3. A FLEET DEFECT IS DEFINED AS THE FAILURE OF IDENTICAL ITEMS COVERED BY THE WARRANTY AND OCCURRING IN THE COMPLETE BUS WARRANTY PERIOD IN A PROPORTION OF THE BUSES DELIVERED UNDER THE SPECIFIC CONTRACT. FOR DELIVERIES OVER 50 BUSES, THE PROPORTION SHALL BE 20 PERCENT. FOR DELIVERIES OF 10 TO 50 BUSES, THE PROPORTION SHALL BE 25 PERCENT. FOR DELIVERIES OF UNDER 10 BUSES, THE FLEET DEFECT PROVISION SHALL NOT APPLY. FLEET DEFECT DOES NOT APPLY TO WARRANTIES EXTENDED BEYOND THE PROVISIONS ALLOWED UNDER THE FTA DRAFT PROPOSAL. THE WARRANTY ON ITEMS DETERMINED TO BE FLEET DEFECTS SHALL BE EXTENDED FOR THE TIME AND/OR MILES OF THE ORIGINAL WARRANTY BUT NOT TO EXCEED ONE YEAR OR 50,000 MILES ADDITIONAL, WHICHEVER COMES FIRST. THIS EXTENDED WARRANTY SHALL BEGIN ON THE DATE A FLEET DEFECT WAS DETERMINED TO EXIST OR ON THE REPAIR/REPLACEMENT DATE FOR CORRECTED ITEMS.

## LETTER FROM EUGENE F. TUNILA

The Honorable Brian W. Clymer  
Administrator  
Federal Transit Administration  
400 Seventh St., S.W.  
Washington, DC 20590

November 24, 1992

Dear Mr. Clymer:

Following is the viewpoint of TMC relative to the draft warranty levels recommended:

- Refer to Attachment "A" for OEM warranties provided for by various major suppliers.
- TMC, since it has optional stainless steel in critical structural components, can easily extend beyond the seven (7) year corrosion recommendation.

Another area of concern is the Fleet Defect provision which needs clarification. (Refer to Proposed Fleet Defect Clarification attached). Some properties are applying the 20% fleet defect rule to systems rather than components which creates all types of ambiguous contentious situations relative to the definition of a system. Another item on fleet defects is the potential for "Evergreen" warranty whereby warranty coverage is extended potentially for the life of the bus if repetitive failures occur within the extended warranty period rather than during the standard warranty period. In effect, on a five-year extended warranty, the fleet defect is 4%, not 20% as intended.

We at TMC appreciate your concerns on FTA policy and look forward to the conclusion of this matter.

Very truly yours,



Eugene F. Tunila  
Group Executive Vice President  
North American Bus

Attachments



## ATTACHMENT "A"

PRODUCT	SUPPLIER	STANDARD WARRANTY TERMS	FTA PROPOSED
Engine	Cummins	2 yrs/200,000 mi.*	2 yrs/200,000 mi.
Engine	DDC	2 yrs/200,000 mi.*	2 yrs/200,000 mi.
Transmission	Allison	2 yrs/100,000 mi.	2 yrs/100,000 mi.
Transmission	ZF	2 yrs/unlimited mi.	2 yrs/100,000 mi.
Drive Axle	Rockwell	2 yrs/100,000 mi.	2 yrs/100,000 mi.
Drive Axle	Dana	2 yrs/unlimited mi.	2 yrs/100,000 mi.
Brake	Rockwell	2 yrs/50,000 mi.	2 yrs/50,000 mi.
Air Conditioner	Carrier	2 yrs/unlimited mi.	2 yrs/unlimited mi.
Air Conditioner	Thermo King	2 yrs/unlimited mi.	2 yrs/unlimited mi.
Body	TMC	3 yrs/150,000 mi.	3 yrs/150,000 mi.
Structural corrosion	TMC	7 yrs/350,000 mi.	7 yrs/350,000 mi.
Steering gear	R. H. Sheppard	11 yrs/100,000 mi.	N/A
Radiator	Modine	2 yrs/unlimited mi.	N/A
Compressors	Bendix	2 yrs/unlimited mi.	N/A
Seats	American Seating	1 yr/unlimited mi.	N/A
Pumps	E. G. Rotron	2 yrs/unlimited mi.	N/A
Doors	Vapor	1 yr/unlimited mi.	N/A

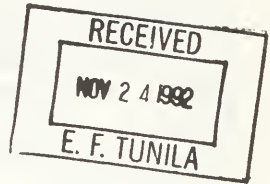
\*Cummins has certain warranty limitations such as: injectors, turbo, etc.

### "PROPOSED FLEET DEFECT CLARIFICATION"

3. A FLEET DEFECT IS DEFINED AS THE FAILURE OF IDENTICAL ITEMS COVERED BY THE WARRANTY AND OCCURRING IN THE COMPLETE BUS WARRANTY PERIOD IN A PROPORTION OF THE BUSES DELIVERED UNDER THE SPECIFIC CONTRACT. FOR DELIVERIES OVER 50 BUSES, THE PROPORTION SHALL BE 20 PERCENT. FOR DELIVERIES OF 10 TO 50 BUSES, THE PROPORTION SHALL BE 25 PERCENT. FOR DELIVERIES OF UNDER 10 BUSES, THE FLEET DEFECT PROVISION SHALL NOT APPLY. FLEET DEFECT DOES NOT APPLY TO WARRANTIES EXTENDED BEYOND THE PROVISIONS ALLOWED UNDER THE FTA DRAFT PROPOSAL. THE WARRANTY ON ITEMS DETERMINED TO BE FLEET DEFECTS SHALL BE EXTENDED FOR THE TIME AND/OR MILES OF THE ORIGINAL WARRANTY BUT NOT TO EXCEED ONE YEAR OR 50,000 MILES ADDITIONAL, WHICHEVER COMES FIRST. THIS EXTENDED WARRANTY SHALL BEGIN ON THE DATE A FLEET DEFECT WAS DETERMINED TO EXIST OR ON THE REPAIR/REPLACEMENT DATE FOR CORRECTED ITEMS.

## LETTER FROM BRIAN W. CLYMER

NOV 20 1992



Mr. Eugene F. Tunila  
 Group Executive Vice President  
 North American Transit Bus  
 Transportation Manufacturing Corporation  
 Box 5670 (R.I.A.C.)  
 Roswell, New Mexico 88202-5670

Dear Mr. *Eugene* Tunila

This is in response to your letter of October 8, 1992, requesting that the Federal Transit Administration (FTA) review the problems associated with extended warranties. We share your concerns because of the impact on vehicle capital costs. As you are aware, it has been FTA's policy that "standard" warranties are eligible capital costs of the purchase of buses, while extended warranties are operating costs. The major problem has been the interpretation of "standard" warranties.

To address this issue, I distributed a draft "Dear Colleague" letter (enclosed) clarifying FTA's warranty policy for heavy-duty buses to the America Public Transit Association's (APTA) associate members for comment at the annual conference in San Diego. Your comments on this letter are welcomed or you may want to participate in the group being formed to provide APTA's comments. The APTA contact person is Frank Cihak who can be reached at (202) 898-4080.

Thank you for your interest in FTA's warranty policy and if you have any questions, please contact George Izumi at (202) 366-6475.

Sincerely,

Brian W. Clymer

Enclosure

*I know you're aware of this already. Thanks for your input!*

## LETTER FROM BRIAN W. CLYMER

Dear Colleague:

I am pleased to announce a clarification of the Federal Transit Administration's (FTA) policy concerning eligibility for capital funding of warranties on heavy-duty buses with a minimum service life of 12 years or 500,000 miles. FTA's policy for the past ten years has been that "standard" warranties are eligible capital costs as part of the purchase of buses, while extended warranties are operating costs. Some grantees have experienced difficulty in interpreting the FTA warranty policy. This letter clarifies the warranty provisions that are eligible for capital funding. Effective January 1, 1993, the following bus warranty provisions are eligible for FTA capital funding:

1. COMPLETE BUS: The complete bus is warranted and guaranteed to be free from defects due to design or workmanship for one year or 50,000 miles, whichever comes first, beginning on the in-service date or date of acceptance, whichever comes first, for each bus. During this warranty period the bus shall maintain its structural integrity. The warranty is based on normal operation of the bus under the operating conditions prevailing in the operator's locale.
2. SUBSYSTEMS AND COMPONENTS: Specific subsystems and components are warranted and guaranteed to be free from defects and related defects for the following times or mileages:

<u>ITEM</u>	<u>(WHICHEVER OCCURS FIRST)</u>	
	<u>YEARS</u>	<u>MILEAGE</u>
Engine	2	200,000
Transmission	2	100,000
Drive axle	2	100,000
Brake system (excluding friction material)	2	50,000
Air condition system	2	n/a
Basic body structure	3	150,000
Structural integrity corrosion	7	350,000

These warranty levels are recommended, but are not required. However, warranties that exceed the recommended periods are not eligible for capital funds. If you have any questions on the interpretation of this policy, please contact George Izumi of my staff at (202) 366-6475.

Sincerely,

Brian W. Clymer

## LETTER FROM EUGENE F. TUNILA

The Honorable Brian W. Clymer  
 Administrator  
 Federal Transit Administration  
 400 Seventh St., S.W.  
 Washington, DC 20590

October 8, 1992

Dear Mr. Clymer:

About a year ago the Office of the Inspector General, U.S. Department of Transportation, published Report No. R5-UM-1-157 on extended warranties and service agreements funded under UMTA capital grants. The report indicates that in its audit of several properties it was found that some grantees were using capital funds to purchase extended warranties and service agreements which is prohibited by FTA (then UMTA) policy.

The report cites an August 12, 1982 UMTA policy memorandum stating that warranty coverage exceeding industry accepted standards is ineligible for funding under UMTA capital grants because it replaces normal maintenance and can substantially increase prices for rolling stock and equipment. The question seems to be, "what are *industry accepted standards*?" While we recognize there have been some industry meetings on the subject, in the interim, it appears that some grantees are getting more creative, which is having the effect of raising prices.

We are experiencing what we refer to as "warranty creep". For most of us, the *industry accepted standard* has been the warranty provision outlined in the "White Book" specification. This provided for the basic coach warranty of 12 months or 50,000 miles, whichever came first; engine, transmission, structural and air conditioning ran a little longer.

As an example, a recent contract specified five-year warranties on seats, engines, particulate traps, and suspension systems. Another property also specified five years on the engine and particulate trap, as well as two years on the electronic sign, engine accessories and wheelchair lift, as well as five years on electronic destination sign fade! As a bus manufacturer, we are asked by the grantees to supply components manufactured by other companies, whether or not we are convinced they are viable products. Then we are asked to warranty those items and, in some cases, warranty them beyond the standard one-year/50,000 miles.

Even that is not the extent of some of these extended warranties. There are grantees that have language to the effect that the original warranty starts over when a defective part is replaced. In the worst-case scenario, we could be forced into providing an extended warranty on a component we have no control over for the life of the bus. Needless to say, we could not competitively bid on such costly provision with their inherent unknown risks.

We ask that FTA look into the area of extended warranties and their derogatory effect on the capital program. This transfer of operating costs into the capital program has the effect of fewer buses being purchased with the available dollars. In order to maximize the benefit of the available capital dollars, we recommend that FTA reaffirm the warranty provision of the "White Book" which provides an equal playing field for all manufacturers.



We look forward to your earliest response to this issue and we would be happy to provide any additional input you may need.

Very truly yours,

TRANSPORTATION MANUFACTURING CORPORATION



Eugene F. Tunilla  
Group Executive Vice President  
North American Transit Bus

---

[EXHIBIT D]

Good morning. It is my personal belief that transit buses cost 20% more than they should. There is no doubt in my mind, and I am sure there is no doubt in your minds, that costs related to the procurement of transit equipment have risen faster than the rate of inflation, offset somewhat by the recent capacity-influenced pricing which tempers the buyer's view of how unhealthy the transit manufacturers are. Something must be done to get our costs back in line. We must explore all of the innovative methods that can be utilized in procurement, as well as establish a closer relationship between customers, suppliers, manufacturers and the government. We do have the same objective of providing superior public transportation service. We must simplify and streamline the manufacturing/purchasing process and, most important of all, we must look at vehicle specifications and option proliferation if we are to gain a meaningful reduction in procurement costs and enhance vehicle performance.

With federal funding of public transit, competitive bidding by a number of suppliers has always been thought to be the mechanism that would keep prices in control. The more competitors, the greater the competition. Under that scheme, in recent years we have had as many as thirteen manufacturers supplying transit buses to the industry. Some of those manufacturers didn't survive very long, and their demise has left the industry with a fleet of orphans. Parts and technical support have been hard to come by. Today we have perhaps seven or eight manufacturers actively competing. But, in spite of that, prices for transit buses have been creeping up, or should I say, galloping ahead, so that today they are somewhere in the \$200,000 range, and moving upward. Does low bid really work? Paradoxically there is not enough profit being generated by bus assemblers to regenerate much-needed updated products. The question is, what has happened to push those prices up, and what can we do or change to reduce costs both for you as operators and for us as manufacturers? Let's look at some areas that we can't change and then some that we can.

We can't readily change legislated standards - such as safety, clean air and ADA. Government-mandated standards have placed major burdens on all of us for research, development and tooling at the expense of new product development. Relatively limited internal resources have been allocated to improving serviceability,

durability and maintainability and product regeneration which would reduce on-line operating costs.

How then are we to reduce the cost of vehicles that we are putting on the road today? Let's look at items that we can and should change.

On the procurement side, we have for a long time been relying on low bid. Low bid does get us the lowest initial cost, or does it? I'm sure we all recognize, and you particularly, as operators, that low bid does not always get us the product we want or the product with the lowest cost of operation. The far more appropriate way is to rely on negotiated and/or evaluated procurement. We must establish close working relationships among operators, vehicle builders and component suppliers. We must develop the mechanism to enter into long-term supply agreements so that manufacturers and operators can plan accordingly. With long-term agreements on continuity of supply, the level of option tooling can be upgraded to improve quality and reduce cost. I know that in many instances, budget constraints prevent government agencies from making purchase commitments that extend beyond the current fiscal year, but certainly there can be an understanding between buyers and sellers that, provided funds are available, predetermined relationships can be executed.

One of the most positive areas that we can concentrate on for procurement cost reduction is in the area of vehicle specification proliferation. We should look at consolidating vehicle specifications, reducing the number of component suppliers, and limiting the sizes, styles, models, colors, equipment and materials that go into our vehicles. What we can and must do is to select the best product for the best life-cycle cost. And that doesn't necessarily mean the lowest nor the highest initial cost. How did we get into this proliferation bind? As I mentioned earlier, R&D resources at the manufacturer and supplier level have been committed to government-mandated programs. Our customers have been doing their own spec tailoring to get a better product, but there hasn't been a consolidated coordinated approach.

Since White Book specs are not as useful as they once were, this industry has seen rampant product proliferation. At TMC we build one product -- the RTS transit bus. And we offer both front and rear lift units in 35 and 40-foot lengths, and in 96 and 102-inch widths. That gives us eight body shells. Then we have an all stainless steel structure option for negotiated or life-cycle bids with galvaneal for low-price bids. We offer fiberglass exterior panels or galvaneal and aluminum exterior panels. That all translates to 128 different bodies. All of those variants have been introduced to meet customer bid spec requirements.



The body proliferation isn't half the story. We and every bus manufacturer in the industry offer a wide range of windows -- acrylic, glass, various thicknesses, various shades, slider and hopper windows. We have close to 130 window options alone. We all have engines that run on #1 diesel, #2 diesel, engines with particulate traps, ethanol, methanol, liquid natural gas, compressed natural gas and combinations thereof in 2-cycle, 4-cycle, 'T'-drive and angle-drive configurations, and vertical and horizontal exhausts. Take a simple item like wheels. There are hub-piloted wheels, stud-piloted wheels, cast aluminum wheels, and each one of those options impacts the axle hubs where the wheels mount. We have flat doors, wide doors, contour doors, doors that are operated by the driver, doors that are operated by the passenger; we have touch tapes, pull cords, and combinations thereof. In the air conditioning department, we are now using three different compressors, two different condenser evaporator units. We can offer buses with or without air conditioning, with automatic or manual control. Signs -- I don't know how many different signs we have. They come from two major vendors. There are curtain signs; there are electronic signs; there are wide electronic signs; there are tall electronic signs; there are electronic signs on the side, at the rear and there are all kinds

of combinations thereof. The list goes on and on. It covers driver's coat hooks, floor coverings, seats, seating layouts, the kinds of undercoating, lubricants, screws. We even have about six colors of white paint.

The point is that the cost of every one of these deviations from a standard specification impacts our and our suppliers' costs as manufacturers. It requires extraordinary engineering, tooling, component parts/inventories, training costs, manual preparation, as well as bid and pre-bid negotiations. The pre-bid cost includes the time that's lost in administrative and engineering detail, travel costs, and all of the other correspondence that goes back and forth between us and the potential buyer every time a bid comes in. Who pays for all the proliferation and associated costs - we all do. Not exactly a model for protecting and safeguarding the public trust.

Variety is nice. But can any of us afford it? What is the fine line between standardization, proliferation and innovativeness? Based on our own costs for engineering, research and development, tooling and testing, we estimate that proliferation costs the industry probably in the neighborhood of a hundred million dollars a year. In a good year, that would translate to \$33,000 a bus, not just in the price of the bus, but also operational costs.

We must recognize that in this industry, we have to take a pragmatic approach to bus specification. We need greater product standardization, particularly when it comes to options that don't have a positive impact on bus operations. Of course, we recognize that there are some specific fleet requirements based on either operating conditions or geographic locations. Paradoxically, we also need more innovative designs and designs from ancillary high-volume industries - namely, heavy duty trucks.

Where do we go from here? We simply can't afford the proliferation with such a small volume industry base.

Many of the larger transit properties have their own engineering staffs which, in many cases, are as large or larger than any of the bus manufacturers; and when these transit properties call for bids on new equipment, their list of non-standard specifications tends to be somewhat extensive. A major reason for these deviations from manufacturer's standard specs or from the White Book standard specifications is the result of reductions in operating funds. As a result, some unique equipment is being called for; or specifications call for extended warranties; or, in some instances, for a very elaborate training program that requires the preparation of specific user videos, the supply of audio-video equipment, the development of new property-specific mechanic testing and evaluation programs, and many other areas of refinement

that far exceed the objectives of vehicle procurement specifications.

What we are also finding is that more and more suppliers who are supplying special equipment, are bypassing bus builders and are encouraging operators to include their products in bid specifications thereby eliminating competitive pricing. The cost that pass-through equipment adds to the cost of the finished vehicle, and the vehicle builder is burdened with the cost of additional engineering, testing and warranty costs that will eventually pass to some buyer, not necessarily the buyer who orders the unique bus.

In order to control this proliferation, we are recommending an industry-wide Data Book on specifications and contract language. Equipment and features that are not part of that standard data book should be 100% financed from local funding, not the normal 80-20% funding unless non-Data Book options are pre-approved by FTA as trial or R&D that has potential application in the Data Book, in which case it should be 100% FTA funded not 80%. Further, with respect to warranty, we should have an industry-standard warranty which supports the Data Book exclusively -- if not in the Data Book, then the property would be responsible for the non-Data Book warranty. If the property dictates/accepts and has design approval of the data book option, then no warranty coverage would apply.



Every procurement contract provides for a pre-delivery inspection by the purchaser. In our experience, those pre-delivery inspections can be quite extensive and expensive for the purchaser. At TMC we frequently find that the inspectors not only inspect the vehicle, but also our manufacturing processes, as well. When you or I buy a new car, we don't have the option of going through the General Motors, Ford or Chrysler plant to see how that vehicle is built, and we don't have any input into how the manufacturer is carrying out his internal business, but we do have the option of inspecting the vehicle in the dealership prior to taking delivery. What TMC does with its supplier base is qualify them so we can audit - not 100% inspect them. We believe that 100% bus inspection by properties should be replaced by audits on final assembly and the manufacturing process, which includes manufacturer certification by the buyers. Statistical control methods have proven that auditing on a random sample basis is every bit as effective in determining the overall quality as is 100% inspection. Result -- focused quality standards applications and all of its associated savings in capital and operating costs.

When we look at the supplier side of the industry, we find that there are about seven major suppliers whose components make up the major portion of every transit bus on the road regardless of

whose name plate is on that vehicle. In most instances those suppliers, for all practical purposes, have minimal competitors. As a consequence, there is relatively little competitive pressure on those vendors to be truly competitive on price. While we are opposed to having a wide range of suppliers for every component, we would like to see some healthy competition in the major components that are used on a bus.

Finally, we would like to see the development of a good reconditioned, remanufactured used-vehicle market. Such a program requires creative financing, making it easier for operators to turn in those vehicles when purchasing new ones, preferably at the time of the first major overhaul. The remanufactured vehicle could then be returned to service either with other domestic operators or, for that matter, could be exported and/or remanufactured to or in foreign markets. Residual value then becomes an important part of the procurement evaluation. In many other countries, buses are initially purchased for urban use, converted to suburban use then rural use. Three applications and life cycles of the same vehicle. Why not here? Maybe three life cycles would provide an alternative to suburban and rural America that is not provided by existing methodology. Visualize this - 80% federal funded - lease 20% or the local share. -- Lease may now be longer than six years - just

like leasing a van - minimal risk. Same scenario as a REMAN bus - 20% of 120 to 140K - for 6 to 8 years - DYNAMITE!

In summing up, we recognize that a number of factors have combined to increase the cost of today's transit bus. These include vehicle design areas that have been mandated and that we cannot readily change. But we can rely on negotiated and evaluated procurement, work more closely with our suppliers, and enter into long-term supply/purchase agreements to achieve another more effective tooling and volume level. We can reduce proliferation; we can consolidate vehicle specifications; we can adopt ancillary high-volume industry features/components, and we can reduce the number of component suppliers in some areas, while adding healthy competition in other areas. What we can and must do is to select the best products for the best life-cycle cost, redefine what life cycle is, and not be strictly guided by the lowest initial cost.

And finally, creative utilization of the 80% FTA funding in conjunction with or without REMAN. The result -- we can all work together to produce the transportation service that is needed for the 21st century.

Thank you.

## COALITION FOR RECREATIONAL TRAILS

### STATEMENT OF ROY W. MUTH, CHAIR

Mr. Chairman and members of the Subcommittee, the National Recreational Trails Fund Act, Title I, Part B of the Intermodal Surface Transportation Efficiency Act of 1991 (PL102-240), established the National Recreational Trails Trust Fund. The act authorized a transfer of revenues to the trust fund in amounts which correspond to receipts from nonhighway recreational fuel taxes.

The Coalition for Recreational Trails (CRT) was formed in January 1992 for the sole purpose of ensuring adequate funding for the National Recreational Trails Trust Fund. CRT's members are primarily national organizations, now numbering twenty-six, which represent the interests of trail users -- both nonmotorized recreationists and motorized recreationists. A membership roster is attached to this statement.

The authorizing legislation sets an annual limitation on obligations of \$30 million for FY 1992 through FY 1997. In FY 1992, no funds were appropriated; in FY 1993, only \$7.5 million was appropriated. Therefore, of the potential \$60 million that could have been used on trails projects, currently only \$7.5 million is available -- a \$52.5 million shortfall.

An ongoing CRT survey, which has produced responses from 28 states to date, indicates a need for funding current trail projects totaling \$279.2 million. As an example, the New Jersey Department of Environmental Protection and Energy, in addition to identifying trails projects with funding needs totaling \$149 million, reported the following:

"However, gauging the amount of funding requested by various public and private entities for ISTEA Enhancement funding, the amount of money to be provided under all of ISTEA's sources will not meet the trail needs in the State. For this fiscal year alone, NJDOT received 220 proposals of \$155 million for approximately \$6 million available. Requests for funding from the New Jersey State Park Service, alone, totalled over \$7 million. A State Trails Inventory of almost 100 trails and trail systems has revealed a great need for signage, parking lot construction, erosion control measures, informational brochures on trails and trail etiquette, conversion of trails to be made accessible for the disabled under the guidelines of the Americans with Disabilities Act, and acquisition of land for new trails or trail facilities. New Jersey's \$124,000 in FY '93 will be far short of getting close to the trail needs in our state."<sup>1</sup>

A summary of the state responses is attached to this statement.

The trail systems and projects that would be developed or restored through the trails trust fund will have significant recreational and environmental value. Equally important is the economic impact of the projects funded by the Act. These projects will help create new jobs, enhance property values, expand local businesses and increase local tax revenues.

Mr. Chairman, we urge your leadership and that of the Subcommittee in providing a \$52.5 million supplemental appropriation for the National Recreational Trails Trust Fund so that the badly needed investment in these vital recreational resources can begin at once.

<sup>1</sup> Source: Letter dated February 22, 1993 from Celeste Tracy, Supervising Planner, Office of Natural Lands Management, Division of Parks and Forestry, New Jersey Department of Environmental Protection and Energy



Trail Projects Eligible for Funding Under the  
National Recreational Trails Fund Act

Current Funding Needs

Alaska	\$ 625,000
Arizona	6,266,000
Colorado	5,417,332
District of Columbia	1,200,000
Delaware	30,000
Florida	4,100,000
Georgia	212,000
Illinois	575,000
Indiana	3,500,000
Iowa	2,259,603
Kansas	14,834,594
Kentucky	512,096
Maryland	1,109,500
Michigan	1,810,000
Missouri	578,384
New Jersey	149,000,000
New York	2,500,000
North Carolina	8,781,000
North Dakota	2,255,665
Ohio	670,270
Oklahoma	182,850
Oregon	156,000
Pennsylvania	68,600,000
South Carolina	750,000
Vermont	1,000,000
Virginia	1,000,000
Wisconsin	1,116,500
Wyoming	225,000

**TOTAL** **\$279,266,794**

NOTE: Individual state data is available from the Coalition for Recreational Trails on request.

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# ECONOMIC STIMULUS PROPOSALS AND INFRASTRUCTURE INVESTMENT

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TUESDAY, FEBRUARY 23, 1993

U.S. SENATE,  
SUBCOMMITTEE ON TRANSPORTATION  
AND RELATED AGENCIES,  
COMMITTEE ON APPROPRIATIONS,  
*Washington, DC.*

The subcommittee met at 10:03 a.m., in room SD-192, Dirksen Senate Office Building, Hon. Frank R. Lautenberg (chairman) presiding.

Present: Senators Lautenberg and Harkin.

## DEPARTMENT OF TRANSPORTATION

### ECONOMIC STIMULUS PROPOSAL (H.R. 1335)

STATEMENT OF FEDERICO PEÑA, SECRETARY OF TRANSPORTATION  
ACCOMPANIED BY KATHERINE E. COLLINS, ACTING ASSISTANT SECRETARY FOR BUDGET AND PROGRAMS

#### REMARKS OF SENATOR LAUTENBERG

Senator LAUTENBERG. We will call the hearing of the Subcommittee on Transportation of the Appropriations Committee to order. And we will welcome Secretary Peña here for his first appearance before this subcommittee.

We are delighted to see you, Mr. Secretary. You have the good fortune of taking the helm at DOT under a President who understands the pivotal role that transportation plays in improving our economy and our environment, and enhancing our quality of life.

I hope that this is the beginning of a long and productive relationship, as we work together to address the critical and diverse transportation needs of our country.

Last week, President Clinton unveiled his plan to revitalize our economy. That plan included a \$30 billion package of spending and tax incentives designed, in the President's words, to jump start this economy and, for the longer term, a 4-year, \$160 billion plan of targeted investments.

Both parts of the President's investment plan highlight transportation. Within the immediate stimulus program is \$4.1 billion in transportation spending and the President's long-term investment plan calls for increased spending for transportation in the period covering 1994 through 1997. This is a plan that will fully fund the landmark ISTEA legislation with which you are very familiar, Mr.

Secretary, as well as making critical investments in other parts of our transportation infrastructure.

For my State, New Jersey, the President's proposal could mean over \$145 million in additional highway and transit funding, and the creation of over 6,000 jobs.

At a time when New Jersey's unemployment rate still exceeds the national average and we have \$200 million in ready-to-go projects, this funding would be a welcome shot in the arm. I am going to do all I can to make sure that New Jersey, along with the rest of the country, gets this important boost.

Now, Mr. Secretary, we have discussed this enough for you to know that short-term transportation spending is not everything that I have advocated within the plan that is proposed. But, combined with a commitment to support a sustained level of increased infrastructure spending, the President's proposals do put us on a path to creating jobs today and building a base for future economic growth.

As one of the few people in the Senate who spent a career in board rooms, not courtrooms, I look at things perhaps a little bit differently than many around here. I think that the country needs to be run in a more businesslike fashion.

Part of that means making investments today that will benefit us tomorrow. The reality is that we are locked in a high-stakes battle to come out ahead in the global economy. It is not unlike companies looking to compete in international markets. When we make that comparison and look at how things have gone in the private sector, the need for change from the policies of the last 12 years is clear. How have the most successful companies come out ahead? Not just by shrinking back. Not just by huge cuts. But, rather, by looking ahead and making the select investments that can help the company grow and gain market share.

If we look at our friends, the Japanese, in the 1960's, their businesses were largely second rate, turning out mediocre products that could not measure up to our standards. But they took the long-term approach. They made the right decisions. They invested in new technologies, in new equipment, to make them more efficient. They invested in their workers to make them more proficient. And we have all seen the results.

While we have been kind of jogging in place, they have sprinted past, grabbing the lion's share of industries that we created and, for a long time, dominated.

We see the same thing happening when it comes to Federal policies. On a relative basis, Japan invests 23 times what we do in infrastructure, and Germany 15 times as much. They are maintaining their existing systems, developing new technologies, and making themselves, at the same time, more productive. And, through reduced market shares and exports, we are the ones who are really paying the price for their investments.

The transportation component is one of the many aspects of the President's plan designed to reverse that trend. It would begin with an additional \$4.1 billion for highways, transit, airports, and rail systems in the current fiscal year. And, it would expand transportation investment in the out-years, both for the basic maintenance of our existing systems and for increased attention to critical pro-



grams like high-speed rail and smart cars, smart highways as well. Smart drivers we cannot do a lot about. [Laughter.]

As we discussed at our previous hearing, those programs produce tremendous benefits for this country in the form of more efficient and productive transportation and by opening up new markets and export opportunities for American business.

These investments will pay off. They will make us more productive and more competitive. As chairman of this subcommittee, I have worked to expand our investment in transportation, because I know that it is critical to our economic future.

Now that we have an administration that understands this, I am hopeful, Mr. Secretary, that we can get to work and make the investments and improvements necessary to compete and win in this global economy.

Now, we met before you were Secretary, when you had the responsibility for the well-being of the city of Denver, one of the great cities in this country, a city wrestling with growth, a city wrestling with development. And you focused very markedly on the transportation infrastructure of that city, including airports, bus lanes, and all kinds of infrastructure investments.

You know how important transportation spending and transportation investment is for the city of Denver. And I know that, when you took this assignment, you and I discussed it. And I know that you recognize that that value is similarly effective in other places around the country.

I do not have to remind you, I am sure, that I come from the most densely populated State in the United States. I think we are a microcosm of urban America and that, if we are to function effectively, we have to have the kind of transportation systems that accommodate rapid movement, efficient distribution of commerce and goods. In addition, we are now required to meet the mandates recently placed on all of our communities, including Denver, as well as the east coast and west coast communities, by the Clean Air Act, recognizing that all of us have an obligation to leave a habitable Earth to those who follow us. At the same time, we can reduce our dependence on foreign oil imports and make our country more competitive—all very worthwhile objectives. And with a very significant short-term gain: getting people to work. Because, though some economists, some of the tables tell us that the recession is just about over, it would be a pretty hard thing to convince 27,000 people employed by Boeing, for instance, that the recession is past us. Or people like, and forgive the personalization, my daughter who was with IBM for 6 years, and suddenly told that in the process of reduction that her job was terminated. And so the story goes throughout the country.

So, while the signs may be that the recession is largely behind us, the fact of the matter is that we still have a significant depression in jobs. And part of what we can do with a good sensible transportation investment program is put people to work while we make our country a better place to live, and make us more internationally competitive.

## PREPARED STATEMENTS

With that, Mr. Secretary, I say welcome. Please give your testimony. Apparently, we have time, and I am interested to hear everything you say. Before you begin, however, I would like to insert some opening remarks from three of my colleagues who have informed my staff they will not be able to attend this morning's hearing. At this point in the record, please insert opening statements from Senator Sasser, Senator D'Amato, and Senator Domenici. And with that, Mr. Secretary, please proceed.

[The statements follow:]

## STATEMENT OF SENATOR SASSER

Good morning. I join in welcoming Secretary Peña to the first of what promises to be many appearances before the Subcommittee on Transportation Appropriations. I might add I'm quite confident that the critical transportation decisions that must be made will no longer languish to a dead end on Pennsylvania Avenue. There is every good reason to believe the Clinton Administration will join with the Congress to foster a bridge to a renewed, productive, and forward-looking U.S. transportation policy.

I commend Chairman Lautenberg for acting swiftly to get the Clinton Transportation Supplemental before the Subcommittee. And, the Administration has demonstrated a timely recognition that if America is to be rebuilt, public investment in infrastructure must pave the way.

For over a decade, America has not done right by its physical infrastructure. The palpable evidence, whether in potholes, congestion, or bridge closings is all across this nation. No community large or small, urban or rural has been spared. For over a decade, while we in Congress have argued with various Administrations over whether funds devoted to highways, roads, bridges and mass transit represented an investment or spending, all of these systems and others continue to fail the American people.

According to the noted economist, David Aschauer, in an article entitled "The Infrastructure Deficit", U.S. productivity growth would have been 50 percent higher but for the infrastructure disinvestment that occurred in the latter 1970's and throughout the 1980's. America has paid a high price for this disinvestment.

In retrospect, it seems ironic that the previous Administration would package its final transportation proposal under the title "Moving America". The record clearly indicates that for the past 12 years, the Federal involvement in transportation infrastructure more accurately resembled "Falling Behind". During this time, the United States has lagged woefully behind its competitors in terms of its commitment and investment in its physical infrastructure.

Let me take a few moments to illustrate what I mean. Over the past three years, the U.S. ranked dead last among the world's leading industrialized nations in terms of the percentage of GDP dedicated to new public and private investments. In 1989, the U.S. devoted a mere 1.6 percent of GDP to investment, last behind Japan (5.0 percent), Italy (3.5 percent), France (3.2 percent), Canada (2.4 percent), Germany (2.3 percent), and Great Britain (1.9 percent) respectively. And, throughout the 1980's, the U.S. devoted a paltry 0.3 percent of GDP to net infrastructure investment, again, last among the seven advanced industrialized nations.

One is left with the analogy of the lone runner, left circling a course long after all of his competitors have mastered it. In another arena, one might be tempted to applaud such courage and tenacity. But in a world where the United States has for so long been the front-runner and the odds on favorite to win every race, the analogy is indeed sobering. As President Clinton has so often stated, "America can do better".

The Clinton Administration's transportation stimulus packages cannot alter this legacy of disinvestment overnight. It is, however, a much needed, and long overdue step in the right direction. The package itself includes an additional \$3 billion for highways, \$736 million for mass transit capital improvements, \$250 million for Airport Improvement Grants, and \$188 million for Amtrak capital grants. And, this is just the critical first step. In the long-term, the Clinton Administration will provide for full funding of the Intermodal Surface Transportation Efficiency Act of 1991.

More importantly, the Clinton Administration through its economic stimulus package has demonstrated hands-on leadership in facing head-on the most critical problem facing the nation—jobs. Although the nation has been in economic recovery,

Americans have little in the way of good, new jobs to show for it. In fact, today's unemployment rate of 7.1 percent is actually 0.4 percent higher than when the recession was said to have officially ended.

The Clinton Administration understands this. That is why I believe the Clinton economic stimulus program will create jobs. The Clinton Administration's Transportation Supplemental sends an important signal about the direction in which the nation's transportation policy ought to be headed.

I look forward to hearing your testimony Secretary Peña. And, I look forward to working closely with the Administration.

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#### STATEMENT OF SENATOR D'AMATO

I am pleased to join you in welcoming Secretary Federico Peña to today's hearing on President Clinton's fiscal year 1993 supplemental request. This is the Secretary's first appearance before our subcommittee, and I look forward to working with him.

Obviously, this subcommittee's area of concern covers the transportation infrastructure portions, some \$4.16 billion of the President's total \$30 billion stimulus package. It would add nearly \$3 billion for highways, \$752 million for transit capital grants (including \$270 million for discretionary bus grants), \$250 million for airport grants, and \$188 million for Amtrak capital.

Our top priorities as we review this request must be whether the funds can be immediately spent on needed projects that are "ready-to-go" and will create jobs. Moreover, this additional appropriation should not simply allow states to substitute federal dollars for already programmed state dollars. Projects funded under this package should be worthwhile federal projects that but for this supplemental package would have had to wait for the regular year funding bill.

The national budget deficit remains at about \$290 billion, and is expected to double in the next ten years. Obviously, we need to examine closely the need for supplemental spending prior to enactment of a real deficit reduction plan. I have already commented on some elements of the stimulus proposal that I regard as boondoggles that actually will harm working middle class families and senior citizens. However, transportation infrastructure projects can be moneys well-spent and I am very interested in the details of this proposal.

It is important how the proposed funds would be allocated to the states and quickly turned into real jobs. Mr. Secretary, your justifications will be of great interest to this Senator.

Thank you, Mr. Chairman.

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#### STATEMENT OF SENATOR DOMENICI

Mr. Chairman, I appreciate the opportunity to go on record with my reservations about this stimulus package. I believe it's important to explain my opposition, which is based not on an aversion to funding transportation infrastructure—to the contrary, I think my record has demonstrated my commitment in that regard.

My opposition to the stimulus proposal is founded in three fundamental areas: first, the questionable need for stimulus at a time the economy and productivity are growing significantly; second, the historical failure of Congressional attempts to "stimulate" the economy and the creation of jobs, most being enacted and implemented far into self-sustaining recoveries; and perhaps most important, the prospect of further increasing the deficit \* \* \* already providing an estimated \$310 billion in stimulus for this fiscal year.

As details of the President's economic plan have unfolded, my opposition to a stimulus proposal has strengthened. Not only must we question the need and effectiveness of such a "stimulus", we must measure that proposal in tandem with the President's entire economic plan.

That is a plan which does not deliver on the real and substantial deficit reduction promised during the campaign. It is a plan which offers a mere 44 cents in spending cuts for every dollar of tax increases, and it is a plan which, by the Administration's own numbers, will result in a 1998 deficit which is only \$50 billion less than last year's record \$290 billion deficit, only to increase thereafter.

President Clinton's plan recommends, in addition to this \$18 billion spending stimulus, another \$160 billion for "investment" over and above what we are currently spending. While I heartily concur with the President that we need to shift more of our federal spending from consumption programs to more future oriented investment, his plan does not represent a shift, but rather increased spending in the name of "investment".



I suggest that deficit reduction in place of the recommended spending increases would contribute far more to the long-term sustained growth of our economy.

There could be no greater assistance we could offer our cities and States than that provided by the strong, sustained growth of our economy. No amount of public works spending or temporary, government-created jobs will match the contribution of permanent jobs created by the private sector.

I would raise several points with regard to the transportation component of this stimulus package. I think we must not fall into the trap of assuming that every public dollar spent for infrastructure is a dollar which will contribute to the creation of new jobs, nor that it will yield a greater or even comparable rate of return to that of the private sector investment.

We found most recently in the 1983 jobs bill that public works spending was an inefficient means of creating jobs in a timely way at reasonable cost. Even if it were possible to speed up obligation of these funds, determining projects for funding by some "ready to go" criterion does not bode well for the likelihood of funding the most cost-beneficial, productive projects.

By virtue of the fact that these dollars would be distributed based on current allocation formulas, we are acknowledging the fact that this assistance would not be targeted to those areas of the country which are still experiencing a slow rate of growth. While California and parts of the northeast are still in distress, most of the rest of the country is rebounding nicely from the period of slow growth.

Finally, I would dispute the urgency of further increases in transportation infrastructure funding. Over the past four years, we have increased infrastructure spending by approximately 30 percent real growth, including substantial increases in aviation, highways and environmental infrastructure. We have come a long way in addressing any "investment deficit". Given this increased investment over the past four years, it becomes even less likely that newly selected infrastructure projects would yield the high rates of return in productivity that might be achieved during a period of low investment.

In closing, I would hope we could have the discipline to look beyond the vote that is politically expedient in the near-term to that which is responsible and most likely to contribute to the revitalization of our economy into the next century.

#### OPENING STATEMENT OF SECRETARY PEÑA

Mr. PEÑA. Thank you very much, Mr. Chairman. Let me tell you, it is a great honor to be here this morning before this committee and before this chairman, because I very well know the leadership that you have provided over so many years on this subject. I have a sense that for a while you may have felt you were alone in making these sorts of arguments.

I am very happy to report to you, Mr. Chairman, that you now have an administration which shares and endorses your philosophy of investing in infrastructure to move our economy forward. Certainly this new Transportation Secretary shares that philosophy.

Mr. Chairman, I have some prepared remarks which I will not read. I would like to formally submit those for the record.

Senator LAUTENBERG. Without objection, certainly.

Mr. PEÑA. Thank you.

What I would like to do is generally share some thoughts about the stimulus package, and I would be very happy to answer your questions after that period.

Mr. Chairman, as you have stated so eloquently, the President, last week, articulated his understanding of the concern of so many Americans about our economy today, and his view that we have a very small window of opportunity to make a significant change in the direction of this country. As he said to the American public last week, if we do not make this very significant and radical change now, we will see a country in a few years which we will not recognize, and probably one which we will not like very much.



In his vision and the economic proposal he outlined last week, there are three fundamental parts. One was, and you have already referred to it as the stimulus package, what I would like to refer to as the booster shot. The shot in the arm to our economy to get it moving again.

Second, is the longer-term investment package which he outlined. Then, third, a very significant commitment to deficit reduction.

I have been traveling around the country with other members of the Cabinet, talking to the American people about these three parts of the economic package. I must say, Mr. Chairman, that when we get to the deficit reduction part, we probably get the largest cheers from Americans who hear us talk about the fact that we are first going to cut unnecessary programs in the Federal Government, starting first with the President himself, and then on through the various departments. We were also very serious about making a significant reduction in that deficit.

#### ECONOMIC STIMULUS PROPOSAL

With respect to the first part of the economic plan, the stimulus package, this program contemplates a \$30 billion immediate investment and shot in the arm to our economy. It is broken down into a number of categories, ranging from investment in transportation, in the environment, in housing and education, and then a very significant part for tax incentives for the private sector. As the President stated, he strongly believes that it is the private sector that is going to drive this economy. But the goal is to create about 500,000 jobs by the end of the fiscal year in 1994.

Let me focus on the \$16 billion, which will be committed to actual investment. Of that, as you stated, \$4.1 billion is committed to the Department of Transportation and transportation generally. That is a little over 25 percent of the \$16 billion that is available in the stimulus package.

That \$4.1 billion will be broken down as follows: \$3 billion for full funding of the Federal-aid Highway piece of ISTEA, a commitment which you and so many other members of the Senate and the House have been calling for, for some time. We are happy to report that we have responded; a \$752 million investment in transit grants; \$250 million for airport grants; and \$188 million for Amtrak.

Let me talk about the rationale for this stimulus package, Mr. Chairman, although you have already talked about it. There is still some debate about the need for the stimulus package.

I have to tell you—having just come from Boeing yesterday with the President, and observing first hand the feelings of the employees and of that city, and of the mayor, about what is happening to the city of Seattle and the entire Puget Sound area, the very same concern that I pick up as I go to Kentucky and Colorado and other parts of the country—people genuinely feel that the economy has not turned around.

## RATIONALE FOR STIMULUS

While we may read that certain economic indicators are much more positive than they were a couple of quarters ago, the fact is we are losing jobs not only in Boeing, but throughout the country. People are very excited about the fact that at long last we have an administration that is going to take a dramatic step to do something about the loss of jobs, and to do something immediately. For that reason, we strongly believe that a stimulus package is necessary, and also the call for an emergency to get the stimulus package passed.

Now, with respect to the particular funds for transportation, let me talk just generally about how the moneys are going to be spent.

We want to ensure that these funds get out to the States as quickly as possible and that spending occurs immediately. We are going to use existing programs. We do not want to start new programs and use new criteria. We do not want to waive any current requirements that exist in ISTEA.

The reason for that is in our conversations with the Governors and the States and other organizations, everyone is already very familiar with the law, and the processes, and is comfortable with the process. We think that is the fastest way to get this money out in a quick fashion.

The kinds of projects that might be funded with the \$4.1 billion range from 3R work in the area of highways to the acquisition of buses and vans, runways and other airport improvements, and Amtrak station improvements, and equipment overhaul. We are very confident that the States and the cities are prepared to take this stimulus package and act on it.

Let me just give you a couple of examples. I addressed the National Governors Association about 3 weeks ago. I have also spoken to the U.S. Conference of Mayors. Our regional offices have been speaking very directly to the State DOT's and to cities and local governments in the various States around the country, informing them that we are interested in developing a stimulus package. This was back a month or so ago. I believe that they are ready. They are prepared. They are looking forward for the Congress to pass this package as quickly as possible so they can move as quickly as possible.

## USE-IT-OR-LOSE-IT PROVISION

Now, there is one message that we would like to send to ensure that the spending occurs very quickly, and that is a clause that we are calling the use-it-or-lose-it provision. This simply says that once the legislation is passed, and we are hopeful that that will occur sometime by the end of March, that the States have 60 days within which to have bids received, or else those highway funds will be redistributed elsewhere.

I know that might appear to be a bit aggressive in the criteria that we might want to apply. But having spoken to a number of Governors and mayors and transit authorities around the country, I think the overwhelming majority of them are very comfortable with that 60-day period and are prepared to act on it.

So, Mr. Chairman, let me close my comments by simply saying we look forward to working with you and the other members of the committee, with the entire Senate and the House, as we move forward in getting this package passed as quickly as possible.

I want you to know that people around the country believe this is a very important investment for the Nation. There are Governors and mayors and other elected officials who have been calling for these funds for a long time. They are excited that at long last the Federal Government is going to be making a significant commitment in this area. And I believe that they are prepared and up to the task.

Thank you very much.

#### PREPARED STATEMENT

Senator LAUTENBERG. Thank you very much, Mr. Secretary. Your full statement will be made part of the record.

[The statement follows:]

#### STATEMENT OF HON. FEDERICO PEÑA

It is an honor to appear before this Committee to support the President's proposals for economic stimulus to strengthen our economy.

Last week the President spoke eloquently of his vision for the country, a vision of fundamental change geared to investing in the future and restoring the American dream. The foundation of this vision is a strong economy that creates and supports jobs. The President's plan to achieve this goal is a three-part plan: an immediate economic stimulus program; long-term investment; and unprecedented commitment to deficit reduction.

I would like to focus my remarks on the stimulus piece to explain the Administration's philosophy that shapes the proposal, and in specific to address the transportation component.

The stimulus package proposed by the President is a \$30 billion shot in the arm for the American workforce that will support 500,000 new jobs by the end of fiscal year 1994. Its goal is to support and strengthen an economic recovery that, unfortunately, is putting too few people back to work. While the focus is job creation now, the spending included in the stimulus package also responds to the many needs this country faces—in infrastructure, housing, education, job training and the environment. In addition, the package provides tax incentives to spur private economic development.

#### INCREASED SPENDING FOR TRANSPORTATION

The stimulus package includes about \$16 billion in new appropriations and obligations for fiscal year 1993. Of this amount, transportation accounts for \$4.16 billion, more than 25 percent of the total new spending. This includes:

- + \$2.976 billion for Federal-aid highways to fund the ISTEA-authorized obligation limitation of \$18.303 billion, for a total program of \$20.645 billion.
- + \$752 million for transit capital grants, including \$482 million for the Formula Grant program and \$270 million for the Discretionary Grant program, dedicated to buses.
- + \$250 million for discretionary grants under the Airport Improvement Program, to fund a total fiscal year 1993 program of \$2.05 billion.
- + \$188 million for Amtrak capital grants, to fund a total fiscal year 1993 capital program of \$353 million.

#### RATIONALE FOR INCREASED TRANSPORTATION FUNDS

The additional spending proposed for transportation contributes to the goal of economic stimulus as well as to investment for the future. As an economic stimulus, increased funding for transportation creates jobs both directly at the construction site or vehicle manufacturer and indirectly through increased orders for materials and equipment to support transportation improvements. We estimate that the transportation component will generate about 70,000 jobs in the fiscal year 1993–94 period.

Transportation spending is a key investment for the future. Transportation improvements contribute in the long term to the increased productivity of our economy by reducing delays and facilitating the movement of goods to market and people to jobs. Increasing the efficiency of our transportation system helps control the cost of transporting goods which contributes to the competitiveness of our industries.

#### HOW WILL THE TRANSPORTATION FUNDS BE SPENT?

Our proposal will increase the funding or obligation authority in current programs. No new programs are proposed. No changes will be made to Federal regulations and requirements. We will not sacrifice environmental standards or sound planning requirements in order to speed spending. We will work with the existing Federal procedures for project approval and eligibility criteria. These are known procedures with which State and local governments are accustomed.

Our focus will be on work that can be started this fiscal year, before September 30, 1993. That means bids accepted or contracts awarded before the end of this fiscal year.

Based on our surveys of State and local transportation officials, we expect the funds to be spent on such projects as resurfacing, restoring and rehabilitating highways, bus and van purchases and rail modernization, runway and other airport improvements and Amtrak track and station improvements.

#### HOW CAN WE BE SURE THE EXTRA FUNDING WILL TRULY BE A STIMULUS?

We are confident that the increased funding will support additional work above and beyond that which could be supported with funds available to date. This view is based on countless conversations and surveys with state and local transportation officials and our own DOT regional staff to identify or verify additional projects that could begin this fiscal year if additional funds were made available. I have also spoken to various representatives of State and local governments—the Governors, the Conference of Mayors, the American Association of State Highway and Transportation Officials—inviting their input and urging their action and assistance to ensure that our States and cities are ready and able to put these additional funds to work. The additional funding may result in advancing projects that might otherwise not be funded until fiscal year 1994 or later, but that is consistent with the intent of the stimulus package.

The stimulus funds will only be available until September 30, 1993. That creates an added incentive for full use of these funds. As a further step to ensure full use of the funds, we are proposing to redistribute highway obligation authority and transit formula funds that are not used within 60 days of enactment. In the case of highways, we would require that obligation authority for which States have not received bids within 60 days of enactment be redistributed to other States which could put the funds to work. For transit formula grants, we would redistribute to other areas funds that are not obligated within 60 days of enactment.

We will also work with State and local governments toward quick contract award once bids are received.

#### HOW QUICKLY WILL THE PROGRAM BE IMPLEMENTED?

We ask your support for quick enactment of the stimulus legislation. If supplemental appropriations can be enacted by the end of March, then the entire Spring and Summer construction season is available to put additional funds to work.

Mr. Chairman, our goal is a stronger economy that will benefit us all. And in my view, transportation plays an important role in the economic strength of our country. I look forward to working with you and the committee as we work together to achieve a transportation system that serves our country efficiently and effectively.

#### INCREASED HIGHWAY FUNDING

The President's economic stimulus proposal provides a \$2.97 billion increase in obligational authority for highways. This increase fully funds the highway program at the fiscal 1993 level authorized in the Intermodal Surface Transportation Efficiency Act (ISTEA).

A recent survey conducted by the American Association of State Highway and Transportation (AASHTO) Officials documents that the States could undertake an additional \$6.5 billion in ready to go projects. A FHWA field and staff review of specific project lists furnished to AASHTO by the states suggests that there is at least \$2.97 billion (Federal share) in projects that States could have undertaken this year. The feature of the proposed legislation that requires that funds not only be obligated



but that bids be received within sixty days of enactment will ensure that work begins promptly and that jobs are created.

These projects include significant amounts of 3R work as well as major projects both of which will contribute to improving conditions and performance on the nation's highways.

Based on current assessments of highway investment requirements and historical expenditure patterns, the additional limitation, matched by the States at statutory matching rates, could provide approximately 10,000 lane miles of pavement rehabilitation, 1,350 lane-miles of highway capacity, and rehabilitate 650 bridges nationwide. This investment would constitute a major advancement in preserving the Nation's highways and relieving some of the congestion problems that plague our largest urban areas. This additional limitation will support over 72,000 additional direct and indirect highway construction jobs through 1997.

The investment required to maintain 1991 conditions and performance on roads and bridges eligible for Federal-aid Highways in fiscal year 1993 is \$43.3 billion. While the proposed additional limitation will not fully fund the investment requirements to maintain conditions and performance on highways eligible for Federal-aid Highways funds, it would fulfill the Federal commitment made to the States when ISTEA was enacted, just 14 months ago.

States will have the flexibility to allocate this additional limitation to the types of highway improvements most needed in their own areas. Based on a survey of State highway officials, a very large portion of these funds could be used for restoring, resurfacing, and rehabilitating projects, which have more immediate term job-generating impact. The State matching funds' share of the increased limitation would be about \$700 million. All indications are that increased State matching funds, which represent only a very small portion of total State capital highway spending, would not be a problem for most States. For those States which may need time to adjust their finances, ISTEA remedies such as matching share waiver and soft-match minimize State requirements for matching dollars in fiscal year 1993.

#### INCREASED TRANSIT FUNDING

Early in fiscal year 1993, FTA reviewed the backlog of applications for Section 3 discretionary bus funds that were not funded in fiscal year 1992 or earmarked in fiscal year 1993 to determine how many were still unfunded, i.e., which projects were not subsequently funded from other sources, but would merit consideration if additional funds became available.

Of the \$384 million in Section 3 bus applications still pending, it was determined that approximately fifty percent (\$188 million) had met all federal requirements and were ready for immediate obligation.

The FTA regional offices contacted all grantees to ask how much in additional formula capital funds (Sections 9, 18, and 16) could be used if additional funding was made available. The constraints were that the funds had to be applied for and obligated within the fiscal year, and encumbered (under contract) by September 30, 1993. They were told not to include amounts already contained in the Section 3 bus pipeline.

The review determined that at least \$752 million (Federal share) in projects were feasible. Of this amount, an estimated \$270 million in discretionary bus funds could be obligated and encumbered by September 30, 1993. These funds will be used primarily for bus replacement projects. The remaining \$482 million would be made available by formula for "ready to go" bus, rail modernization, and continuing work on existing new start projects.

The Economic Stimulus Package will have a major positive impact on addressing transit's needs for capital investments to improve transit conditions and performance.

The stimulus package calls for the following increases: Sec. 9 urbanized area formula capital, \$439 million; Sec. 18 non-urbanized area formula capital, \$26 million; Sec. 16 specialized service formula capital, \$17 million; and Sec. 3 discretionary bus capital, \$270 million.

It is expected that about one-half of the Section 9 funds will be used for rail modernization and one-half for bus system improvements. Thus, a total of about \$220 million will be used for rail modernization and (including the Section 3 discretionary bus capital funds) about \$490 million for urban bus system improvements.

Of the \$490 million estimated to be spent for urban bus systems, about two-thirds (or \$325 million) is likely to be used for new vehicles and about one-third (\$165 million) for maintenance facility improvements.

In the 1992 edition of the biennial Section 308 Report to Congress, the Federal Transit Administration estimates that the total capital expenditure needed to main-

tain current transit conditions and performance is \$3.9 billion per year. An additional \$1.8 billion per year (or a cumulative total of about \$5.7 billion per year) is needed to eliminate the backlog of deferred capital reinvestment in bus and rail systems and restore these systems to good condition.

The initial appropriation for transit capital spending in fiscal year 1993 was about \$2.6 billion, which with local match and overmatch supports capital spending of about \$4.8 billion or about half-way between the cost to maintain current conditions and performance and that needed to improve conditions.

The additional \$752 million in Federal funds, together with local match, will increase total capital spending on transit to just about the \$5.7 billion level needed to maintain current performance and eliminate the backlog of past disinvestment.

More specifically, the largest likely component of spending (the additional \$325 million in bus vehicle replacement funds) will make a significant improvement in bus fleet conditions. This spending should provide for an additional 1,500 bus purchases during fiscal year 1993. This will increase the rate of bus purchases from 3,200 per year in recent years to about 4,700 per year, or about 50 percent. This is well in excess of the 3,500 buses needed to be purchased each year just to maintain the current average fleet age. Currently, about 18 percent of the nation's bus fleet is considered over-age.

The following chart summarizes the needs estimated in the 1992 Section 308 Report:

[In billions of dollars]

	Bus	Rail	Total
Maintain current conditions and performance .....	\$2.175	\$1.715	\$3.890
Improve conditions .....	0.464	1.371	1.835
Total cost to improve conditions .....	2.639	3.086	5.725
Improve performance .....			1.772
Total improve conditions and performance .....			7.497

#### AMTRAK

The stimulus package includes \$188 million for Amtrak. These funds, in addition to supporting jobs, will enable Amtrak to make some of the improvements that have been neglected in the last decade due to a shortage of capital and to restore the major capital overhauls and other rehabilitation work that was cut back during the recession to offset revenue shortfalls. Amtrak's capital improvement list totals \$3 billion, of which at least \$188 million in projects are likely to be underway this fiscal year.

The benefits of this package amount to better service for the public. These include putting cars and locomotives into better condition, meaning lower operating costs; fewer failures of systems, such as air conditioning and waste disposal; and a more pleasant and comfortable ride and on-board environment. The benefits also include improved station conditions and access for the handicapped, better schedule adherence resulting from improved communications, and a variety of other cost-saving and service benefits.

#### AIRPORT IMPROVEMENT PROGRAM (AIP)

The proposed level of \$250 million included in the stimulus package is in addition to the AIP projects that FAA plans to fund with the \$1.8 billion already appropriated for fiscal year 1993 for AIP. It brings the obligation limitation up to the authorized level of \$2.05 billion. A \$250 million addition mid-way through the fiscal year will allow accomplishment of needed additional airport development while also providing an immediate new stimulus to the economy.

To maximize the effectiveness of these additional funds, the Administration will seek authority to make these funds available on a discretionary basis. The FAA will award these funds using existing grant administration practices to qualified sponsors/projects. It is our intention to award these specific grants within 50 days of enactment of the stimulus legislation and that contracts be awarded immediately thereafter. The FAA has identified possible candidates in excess of the proposed level of \$250 million and does not anticipate difficulty in meeting the intent of the President's economic plan.

The projects identified at this time would provide the economic stimulus necessary to create jobs during fiscal year 1993 while at the same time addressing valid

infrastructure needs and known program priorities of the Nation's airport system. All projects under consideration conform with requirements to receive Federal aid, i.e., they advance airport safety and security; lead to compliance with aviation or environmental standards; and/or would increase capacity to accommodate existing or forecast demands. These projects can be broadly grouped into 7 categories of infrastructure development: Pavement construction; Pavement Rehabilitation; Airfield Lighting; Approach Aids; Sound Insulation; Equipment; and Miscellaneous. The FAA estimates that approximately 75 percent of the funds would be allocated for pavement work, which includes construction, extensions, rehabilitations, and/or general improvements to runways, taxiways, apron areas, and access roads.

FAA met with representatives of both ACI-NA and ATA to review proposed supplemental AIP candidate projects and reach some consensus on the nature and priority of the projects preliminarily identified by FAA regional airports divisions.

#### WAIVER OF STATE MATCH

Senator LAUTENBERG. The thing I am encouraged by is the quickness. I generally support the use-it-or-lose-it concept. I just want to be sure that we allow enough time for the States to apply for these funds.

As part of a design that we introduced when we called for supplemental funding for transportation last year to try and move the economy off the dime, we requested in the legislation a waiver of the State match.

Now, that gives further stimulus to the States to get going on these things. The fact that we are saying use it or you are not going to get it, I think, adds a little bit of an impetus to our moving along.

My mission—and I know that we are on the same wavelength here—is to get things going just as quickly as we can. The word has gone out to the States and the communities. Give us those programs that are almost on the shelf and there are certainly enough around, with some 60-plus percent of the Nation's highways needing repair and almost 40 percent of the Nation's bridges needing repair, that there ought to be enough programs to get placed, contracted out, and going.

The labor supply, as I have talked to both people in management company ownership and labor, I am told that there are plenty of people ready to go to the work with all of the skills and experience necessary. So we ought to be able to get these programs moving hurriedly.

#### UNEMPLOYMENT

You mentioned the deficit, and of course that overlays almost everything that we are thinking about today. And you talked about the enthusiasm with which deficit reduction was greeted. Since it is said that a 1-percent increase in unemployment costs the country approximately \$50 billion—and 1 percent is slightly over 1 million people—if we put \$1 billion in transportation or infrastructure spending and we employ somewhere between 40,000 and 50,000 people, \$25 billion at 40,000 people per \$1 billion would bring back 1 million people to work if all holds. This is new funding, new money.

I assume that that has a significant effect on the deficit. Because if we have to spend \$50 billion when 1 million are out of work, if 1 million are put back to work—and I discussed this with the Budget Director the other day—if 1 million are put back to work,

I am not sure that we totally save \$50 billion, but we save some significant portion of that.

And so that confirms my judgment on what we have to do to make these investments and to do them quickly. And as you know, Mr. Secretary, because we discussed it at length, your stimulus package is somewhat smaller than that which I was originally looking for, but we will have a chance to discuss those as matters develop, because I hope that we can use more funding efficiently and promptly, but again, we will be talking about that.

#### DISTRIBUTION OF HIGHWAY FUNDS

Now, it is my understanding that the highway funds will be distributed to the States using existing formula that we have in ISTEA. Is that the case?

Mr. PEÑA. That is correct.

Senator LAUTENBERG. So that with the highway portion of the \$4.1 billion, that is available to the States on the same structure as it was before, so they are all familiar with it.

Your legislation requires, as you stated, that the States obligate these formula funds within 60 days or risk the loss of funds to other States in the redistribution program. Is that also correct?

Mr. PEÑA. That is correct.

[Further clarifying information follows:]

The sixty-day restriction applies to the Federal-aid highway obligation limitation and the Transit Formula Grants. Our proposal would redistribute unused highway obligation to other States if a State has not obligated the funds and received bids within sixty days. For Transit Formula Grants we will require that the funds be redistributed if not obligated within sixty days.

Senator LAUTENBERG. So those funds will not necessarily be withdrawn from the program, but other States may get them.

In your discussions with Governors and mayors, where you test the 60-day kind of application period, did they ask you about waivers of State match?

Mr. PEÑA. Mr. Chairman, that has not come up a lot and our analysis indicates that there may be 10 or 11 States that may have some problem with the matching requirement. We will continue to use the current waiver provisions in the law, or that in certain cases the funds can be paid back at the end of the project. I do not think it will be a significant problem, even for those 10 or 11 States.

#### USE OF TRANSIT FUNDS

Senator LAUTENBERG. In the transit area, what is proposed is distribution of \$482 million through the existing formula that governs sections 9, 16, and 18. How did you settle on the figure \$482 million, considering that even with this increase, that you are still below the full amount authorized by ISTEA?

Mr. PEÑA. Mr. Chairman, we looked at needs that exist throughout the country. Obviously, there are numbers in excess of that amount. But we had to work within general targets and we felt that was an appropriate figure.

In addition to that, we were also trying to focus on those projects for which we could see expenditures occur also within this very



short timeframe. Unfortunately, in the transit area, some of these expenditures will go on beyond that and so we try to identify and prioritize those that would satisfy the short-term stimulus criteria that we have put into the whole stimulus package.

Senator LAUTENBERG. What is the Department or OMB's thinking on restricting these formula grant funds for capital purposes only and not allowing any use of these funds for operating assistance?

Mr. PEÑA. Well, generally speaking, Mr. Chairman, there is a focus on the capital side and not on the operating side. However, we have had some conversations with OMB about this to give the Department of Transportation a little flexibility here. But at the current time—

Senator LAUTENBERG. Is Kathy in agreement?

Mr. PEÑA. Well, she is agreeing that we have had these conversations. The point is that I think OMB continues to argue the position that the money should primarily be going into capital and not to operations.

Senator LAUTENBERG. Also in the transit area, you are proposing a discretionary grant increase of \$270 million. Since additional bus funds would be discretionary, what will the FTA guidelines look like in distributing the \$270 million among eligible projects?

Mr. PEÑA. Well, Mr. Chairman, there already are a number of requests in for bus purchases. However, we will allow for other requests to be made.

We do not want to unfairly raise expectations beyond that of the amount that we actually have, but we already have a number of requests and we would try to take them in the order in which they have come into the Department.

Senator LAUTENBERG. How about the distribution between large and small cities? Are we trying to get a balance there as well?

Mr. PEÑA. Mr. Chairman, that is something that I am very concerned about. And we are going to be attentive to that need also.

Senator LAUTENBERG. Do you think that there are projects that have been identified that can quickly use these additional funds?

Mr. PEÑA. Yes, Mr. Chairman. My understanding is that there are already proposals or applications in the Department in the area of bus acquisitions.

#### AMTRAK CAPITAL FUNDS

Senator LAUTENBERG. As you know, Amtrak is a favorite subject of mine. I have fought hard against very hostile administrations since I have been here—now 10 years—on funding for Amtrak.

It offers a solution for so many of our problems; in some cases, it may enable us to operate within existing airport capacities and to continue to contain new growth or expansion by offering these passengers a quick, decent, comfortable ride on high-speed rail.

Now in the Northeast section of the country, where the greatest volume of travel takes place overall, it would be a very significant improvement in not only the way we move people and goods, but also quality of life. You recognized that by requesting \$188 million for Amtrak's capital needs. And that is very important.

However, Amtrak has identified over \$600 million and I think it is fair to say that there has been a very good management job done

there. This railroad has turned around substantially. They have, I believe, a larger fare to revenue share than almost any country in the world.

And so, part of what we need is constant improvement in the Northeast corridor. We are at work, as you know, preparing to electrify the section between New Haven, CT, and Boston, MA, which will greatly reduce the time necessary to travel between those cities.

But I did not see any funding for Northeast corridor improvement programs, known as NECIP. Is there a reason for that?

Mr. PEÑA. Mr. Chairman, as we all know, there is separate funding for the Northeast corridor in the NECIP provision. But as respects the stimulus proposal, we envision Amtrak making improvements, many of which will be in the Northeast corridor, in terms of station improvement, trackage, et cetera. I think Amtrak already has a list of where that would specifically impact improvements in the Northeast corridor and would be happy to provide that to you.

Senator LAUTENBERG. The question arises as whether or not these supplemental funds being used—capital railcars, under that heading—makes the most efficient use of money designed to get people back to work.

Does that strike you as some area of conflict? I mean, purchasing that kind of capital equipment. And by golly, I can tell you we need it. I ride the rails, to use the expression, frequently. But getting people to work in Northeast corridor improvements quickly, and get the signal systems, all the safety requirements up to snuff, that can improve the speed and efficiency of the line.

Have you considered that in terms of the job response on these investments?

Mr. PEÑA. We have, Mr. Chairman. It is a little of each, particularly in the area of acquisition of large equipment. Even in the area of, for example, bus acquisition, we ask the same question. Will the bus manufacturers be able to gear up to add to the employment base as those bus orders are made? And the answer is, yes.

I think some of that will also occur on the Amtrak side as respects equipment purchases. But there's also a significant amount in trackage, et cetera, so that we can get people back to work immediately.

Senator LAUTENBERG. Is the administration committed to requesting funding necessary to meet Amtrak's unmet capital needs as well, just generally, as well as funding for expanded high-speed rail?

#### HIGH-SPEED RAIL/MAGLEV INVESTMENT

Mr. PEÑA. Mr. Chairman, on the latter question, there will be about \$1 billion over the next 4 or 5 years which we are going to be investing in a combination of high-speed rail and maglev. My responsibility is to look at both of those areas and to ensure that our investments are effective and that we get something for the investment that we make.

In the area of Amtrak, we will, at a minimum, continue the current level of funding for Amtrak over the next 4 years.

Senator LAUTENBERG. One of the things that struck a favorable note with me inasmuch as you mentioned people around the coun-

try was the President's commitment to encouraging and enhancing the private sector's involvement in the growth of our economy.

And as we look at programs, whether they be maglev or steel on steel in terms of high-speed rail, what kind of response are we getting from the private sector? For instance, there is the train that has been on trial and demonstration here with Amtrak, both in the Northeast and other places around this sector of the country from Chicago on out, called the Swedish X-2000.

That was a very good ride. And if you can find a free moment, I suggest that you take that ride.

Mr. PEÑA. I have, Mr. Chairman.

Senator LAUTENBERG. It is really quite a thriller, especially in that little phone booth cabin that the engineer occupies and you see things whizzing by at 150 miles an hour. They look even faster.

But I am told that once and if an order is placed, that much of the manufacture is going to take place here in this country. And I hope that is the case. Obviously, wherever possible, we have to encourage domestic manufacture and production to make sure that the job impact is felt where we are most concerned about it.

Do you have any idea what percent, what portion of the new bus purchases and Amtrak cars are going to be American made?

Mr. PEÑA. That is a very good question, Mr. Chairman. We are going to use the Buy America provision. We will monitor that very carefully to ensure that is actually what happens.

Senator LAUTENBERG. OK.

Mr. PEÑA. On the other point that you made, Mr. Chairman, on the X-2000, if I might. The frustration for me is being on that tilt train, and being told that this was a technology that was actually invented in our country. Because we did not have an R&D component or a partnership relationship with the inventors, we lost that technology to Sweden. Now we are going to buy that technology back, yes, to have it manufactured here in the United States. I think that is the greatest tragedy about the lack of foresight in investment that you spoke about at the beginning of this hearing.

#### TECHNOLOGY INITIATIVE

I think that is one thing that the President very much wants to get back. Yesterday, when he announced his new technology initiative, that is exactly what he was talking about; how we can form partnerships with the private sector to not only inspire this kind of technology in this country, but ensure that it stays here and that we can then apply it, which is so very well done by the Japanese and the Germans in using our technology. That I hope is one of the hallmarks of this administration over the next 3 or 4 years.

Senator LAUTENBERG. We have to admire what some of our trading partners have done, even perhaps envy. You do not have to look very far. I think if you look at the TV cameras and some of the photography equipment, you will see that the transportation area is not the first place that this loss of technology happened.

But I think there has been an alert go across the country that says, hey, we had better get on the stick—to use the expression—and start improving. And you see it in improved productivity on the production line across the country. There is a new spirit being awakened there. And I think that President Clinton's leadership



can revive it to the point where we can really get moving again. I certainly hope so.

And part of what we are talking about this morning, in my view, is perhaps parochial—because I came out of the computer business. And everybody assumed that when I got to Washington that I was going to be looking at technology issues and the finance issues and instead a large part of my focus is on transportation.

Because I was also a commissioner of the Port Authority of New York and New Jersey, which has all of the modes of transportation. It has the bus terminal. It has several airports, four which it actually owns, Kennedy, LaGuardia, Newark, and Teterboro General Aviation Airport. There are also bridges, tunnels, and the port authority has its own railroad, known as the PATH railroad.

And it became obvious to me, when I took my seat here and left the board of the port authority, that transportation was the critical factor in the urban as well as the rural areas of the country. That was the most significant ingredient in terms of building a full-scale resurgent economy.

And thus, I have become kind of immersed in the transportation problems and opportunities. And clean air and the other problems, dependence on foreign oil, help narrow that focus. So here we are.

One of the things that we also have got to make certain is that, in terms of aviation, that we are doing whatever we can.

#### AIRPORT IMPROVEMENT GRANTS

In distributing the supplemental funding, will the FAA adhere to the same earmarked categories, relievers, noise, safety, et cetera, as it does for the regular program, or will there be a specific project type as a focus of the supplement funds?

Will one be at the expense of the other, and perhaps that is too subjective a way to ask it, but I am concerned about the noise and safety factors. Are the same yardsticks going to be applied with the supplemental funding as we normally have?

Mr. PEÑA. Mr. Chairman, I have not had that specific conversation with the FAA, but I am going to presume, and I will double check this, that we are going to be consistent. Now, these are the discretionary grants.

Senator LAUTENBERG. Right.

Mr. PEÑA. However, I would, again, presume that we are going to be consistent with how we have used those discretionary grants in the past.

[Additional clarifying information follows:]

The Administration's proposal would waive the set-asides required under current law for discretionary grants. Instead, the funds would be awarded on a purely discretionary basis. The rationale for this approach is to facilitate award and initiation of projects. However, the FAA would still require that projects meet AIP requirements. In addition, the project selection process would be sensitive to capacity, safety, security and noise concerns and also seek to include a range of airport types.

Senator LAUTENBERG. You chose \$250 million as a figure for the economic stimulus portion of the airport infrastructure. I am sure you are aware of the bill that I introduced which would supplement the 1993 AIP appropriation by almost eight times that amount to \$1.9 billion. On a comparative basis, the recommendation coming



from the administration seems truly low and I would like to know what the rationale for the number that you have recommended.

Mr. PEÑA. Well, Mr. Chairman, again, our focus was to try to look at those projects that could be encumbered as quickly as possible to have the stimulus effect. It was our judgment that this was an appropriate target to shoot for as respects the Airport Improvement Program. Obviously, there are more needs than this amount, but given the overall package and the distribution among the various areas, this was, I thought, a fair allocation of the funds.

Senator LAUTENBERG. Because there are other cities across America like Denver that would like to see airport improvements take place more rapidly. Again, as I earlier commented, we do not want to deprive the airports of anything that improves safety or access.

I have to tell you that, as a frequent flyer, to use the expression, I often sit on the ground longer than I fly on a very short trip, let us say between here and New Jersey. And one of the things I will ask you at some point in the not too distant future, when you have your team fully in place, is to check and see why it is that there are so many delays, even on the clearest of days and the more inactive times of the day for travel.

But when we look at proposals to expand, let us say, Logan Airport, or replace it, and think of what we might be able to do to contain some of those expansion problems and costs by improving Amtrak, I submit that we have to check that pretty thoroughly.

#### INTELLIGENT VEHICLE HIGHWAY SYSTEMS

One of the things that also has been a principal interest of mine and of the other authors of ISTEA was the IVHS program. Now, it is our belief, my belief, that properly developed and applied Intelligent Vehicle Highway Systems [IVHS] can markedly expand the efficiency and the use of our existing highways.

Rather than to automatically pour more concrete, which in many places is just not possible, the idea is to make these highways function more effectively, by dealing with the weather conditions, alternate routing, et cetera—which, by the way, is off-the-shelf technology. You see it in boats in small packages. You can throw up a display that shows you even the channel markers and the piers and the buoys, the whole business. And certainly you could see that in an automobile.

So we are not talking about esoteric long-range programs, but we are talking about stimulating the interest that has been cultivated in the private sector. There is lots of interest, both in the automobile manufacturing and communications companies. And if I understand it correctly, the administration is asking for some funds above that which has been authorized in ISTEA for the IVHS program.

But I did want to ask whether or not this additional \$100 million you are going to be asking for annually from 1994 to 1997 will be for the research component, or will it be in the project areas, or a combination of both, or have you decided that yet?

## GLOBAL POSITIONING SYSTEM

Mr. PEÑA. We have not decided yet, Mr. Chairman. But I have to share your excitement about this area. The other day I had a briefing at DOT on the global satellite reposition project that we have. The possibilities of applying that technology in the area of transportation are enormous. In fact, the regional transportation district in Denver, in its buses, I think will be the first transit system in the country, later on this summer, that will actually begin to use it for its buses.

Senator LAUTENBERG. You mean so that drivers do not get lost; they know exactly where they are.

Mr. PEÑA. That is right, exactly. Obviously, you are well aware of its current use in the civilian area on the oceans and in ground transportation. So what I want to say is that this Department is going to have a new emphasis on intelligent vehicles, intelligent highways. I have spoken with the Vice President about this. The Vice President is making this a high priority. That was part of the new technology announcement yesterday. And so I think this additional funding will be very helpful in moving us forward in making travel more efficient.

We had a story of one shipper who used this global positioning technology and in 1 week captured the cost just by the fact that the ship was able to get to its destination in a straight line, avoiding the fuel cost that it otherwise was incurring in its traditional mode of navigation. So I think the opportunities are out there and are very worthwhile.

Senator LAUTENBERG. Fantastic. If you saw me raise my eyebrows when you talked about global positioning, I like gadgets and I do some boating, and the unit now that is hand held and coming down rapidly in price, can tell you exactly where you are, which I always had to find out when I was out in the high seas. [Laughter.]

I knew I was going someplace. I was not sure exactly where. But, again, to make the point, it is off-the-shelf technology and rapidly improving and a very exciting marketplace.

Let us talk for a moment—we are joined here by my distinguished colleague, almost President, Tom Harkin.

Senator HARKIN. I am sure glad you remembered.

Senator LAUTENBERG. Cannot forget, Senator, you always remind me. [Laughter.]

## PRIVATE SECTOR PARTNERSHIP

In any event, we will call on Senator Harkin in just a minute. I have just a few more things that I would like to ask, Tom.

Talking about high-speed rail and future investments, what kind of a division do you see in responsibilities between the Federal Government and the private sector, if any, in financing new high-speed rail systems?

Mr. PEÑA. Well, Mr. Chairman, I think this is an area where we have enormous opportunity which has not been fully explored. For example, I was speaking to the Governor of Nevada a week ago about the project that he and a number of private corporations have put together to have a link from Los Angeles to Reno, as I recall. His information was that they were very close to putting

that deal together with a very significant private sector involvement, but for the fact that they were short a small commitment from the Federal Government to give the kind of security necessary to the private investors to make that deal happen.

Those are the kinds of opportunities which I think we ought to explore, and there are similar opportunities in other States, Florida, Texas, et cetera, where a number of ventures have been put together with State governments and the private sector, and I think that is an area that we need to move on as quickly as possible.

We have seen it in other countries. In Mexico for example, you see private corporations, construction companies, doing everything from building toll roads to taking over airports, with a strong involvement on the part of the government. It is a way that that government has been able to leverage the problem of not having enough capital to make investments in infrastructure.

So, sadly, other nations are ahead of us in looking at the private sector in a very creative way to raise some of the capital we need to make these infrastructure investments. That is one thing that I want to work on.

Senator LAUTENBERG. In addition to the private sector funding, your budget documents propose to expand investment in high-speed rail systems by almost \$1.3 billion by 1998. It states that these funds could be used for the startup of private or State and local high-speed projects, not just development of the maglev prototype as called for in ISTEA. And you have just confirmed that what you see is this enormous interest in the private sector if the Government places some seed money down there, and I think that is a responsibility that we have.

Have you any notion about how you are going to distribute these funds? Will they be Amtrak-managed? What do you think?

Mr. PEÑA. Mr. Chairman, no, not yet. We are in the process now of putting that whole strategy together, so we are not prepared today—I am not prepared today to tell you exactly what process we are going to use or what mechanism we are going to use. I want to be as thoughtful about this as possible. I want to talk to a lot of people in the private sector, to many local and State governments about what they think is the most efficient way we can move on this new partnership, before I commit myself to that area.

Senator LAUTENBERG. As formerly the mayor of Denver, I know you had an active involvement with the Coast Guard. [Laughter.]

Mr. PEÑA. We actually have a Coast Guard Reserve.

#### PROCUREMENT PRACTICES

Senator LAUTENBERG. But it is part of your portfolio and a very important part of mine, I must tell you, since little New Jersey has an enormous coastline relative to our land mass. In this Saturday's Washington Post they quote you as having the impression that DOT has a particular problem in managing its procurement programs.

And this subcommittee has voiced concern with those problems, especially in relation to the FAA, which has enormous long range purchasing responsibilities. It has been perhaps in some way confused and befuddled, because it is so complex, very hard to put

your hands around. But nevertheless, there is a lot of money involved and we have to spend those funds as wisely and as efficiently as we can.

The budget documentation accompanying the State of the Union Message calls for increased funding for Coast Guard acquisition of up to \$560 million over the next 5 years. Given the problems that we have had with Coast Guard acquisition in the past, are you comfortable that the Coast Guard's acquisition office is adequately prepared to administer a budget increase of this size?

Mr. PEÑA. Mr. Chairman, without identifying any particular agency in the Department of Transportation—there are many and they all have their unique challenges in the area of procurement—let me say this; I am going to spend a lot of time on this problem. I believe that we ought to bring in a private sector perspective. What I would like to do is to have a private sector objective eye to review some of our procurement practices and ask the question, is this the way it is done in the private sector, is this the best business process to use?

We did that in the city of Denver, where I brought in private businesspeople to review some of our practices which had been ongoing for 3 decades. And, as you know, there is little opportunity in an institution to review those practices on a regular basis. So I think we need to have a fresh perspective, and I intend to do that across the board, throughout the Department in the area of procurement.

Senator LAUTENBERG. Well, Mr. Secretary, we wish you well and pledge to work with you. We may argue about the size of commitments here and there, or perhaps even types of programs, but we are going to work with you.

And I think that you are going to find, around here, that transportation is one of the favorites of all Senators. Even those who decry the spending are always there a little later on saying, "Hey, Frankie, you know, this project I have in x, y, or z State."

"Well," I said, "how about the spending limits?"

"Yeah, but we need this. I mean this is important, you know, We have a lot of congestion here."

"How about the spending limits?"

"Yeah, I know that, but remember there are 500,000 people in this community," et cetera.

So we will continue to work together and encourage those who would carp and disagree to lay out their objections and spell out how much they are willing to sacrifice in terms of their own State before they call in their chits, as they say.

Senator Harkin, delighted, again, to have you, Tom, and the floor is yours.

#### STATEMENT OF SENATOR HARKIN

Senator HARKIN. Thank you very much, Mr. Chairman. I apologize for being a little late for you and for the Secretary and I welcome you to your first appearance before this subcommittee. It is a great subcommittee because we have a great leader of it. Senator Lautenberg has a long history of support for the kind of infrastructure programs that you are going to be administering as the Secretary of Transportation.



And it is, as I am sure you know, through this subcommittee and through the leadership of Senator Lautenberg that we will work out these programs and try to find out the best places to invest the public's money so that we get the best, how I might say it, rate of return I guess you might say, for the public investment.

#### PREPARED STATEMENT

So, again, I just want to welcome you to this subcommittee and to just sort of follow up on—I have a written statement and just ask that it be included in the record, Mr. Chairman.

Senator LAUTENBERG. It will be so included.

[The statement follows:]

#### STATEMENT OF SENATOR HARKIN

Mr. Chairman: I want to take this opportunity to welcome Secretary Peña to his first hearing before this subcommittee. Mr. Secretary, I admire your work, and I look forward to working with you over the next eight years.

I was pleased to see a stimulus package included as part of the President's State of the Union message. Because I believe our economy needs the shot in the arm that federal investment in the infrastructure can provide.

As I've said in the past, I know all the experts say the recession is over. By definition, it ended nearly 20 months ago. Problem is, there are over nine million Americans who haven't heard the textbook definition of a recession, and they're all still out of work.

In the past three months, United Technology announced it's laying off 10,000 workers. Sears told us that it's sending 50,000 people to the unemployment line. IBM has announced it will lay off 25,000 workers. And GM said it was letting 74,000 people go.

And just last week, Boeing gave us the sad news that it will be laying off over 20,000 workers up in Seattle this year.

The number of long term unemployed workers is double the number in 1990. The Wall Street Journal's semi-annual survey of 44 economists released last month projected a decline of less than half of a percent in the unemployment figures this year and a mediocre 3 percent growth in the economy.

Here's the bottom line: we need to put people back to work. These people can't wait around for this so-called recovery to start producing jobs.

I believe the President's stimulus program will put people back to work. If anything, I'd like to see a bigger stimulus package than we have right now. But this is a good beginning, because the paychecks it will provide will boost the entire economy.

The funds provided will also provide permanent structural gains for the economy. Improved efficiency will come from better roads and airports that are repaired or created.

Businesses that ship goods pay for the truck standing in a traffic jam: they pay for the driver, they pay for extra fuel and they pay for extra trucks that are needed because the whole system is less efficient.

By improving our infrastructure almost every business benefits. Our whole economy becomes more productive and gains.

I am pleased to say that the Iowa Department of Transportation and cities across Iowa are ready to go—they are ready to hit the ground running with a large number of transportation projects within 60 days, and will have workers on the job soon thereafter.

In fact, I am told that Iowa and its cities could move forward to obligate twice the \$37 million in highway funds now allocated to my state under the proposal.

What's more, the Kansas City FAA has applications from Iowa's airports in hand for discretionary funds. A statewide joint application from our many local transit systems will soon be sent to the regional office so action can be taken as soon as funds become available.

I am hopeful that the Congress will move forward and pass the stimulus package within 30 days—because we have to put people back to work right now.

Mr. Chairman, I believe we must invest in America. Thank you.

## INTERNATIONAL BANK OF SETTLEMENTS REPORT

Senator HARKIN. I will just sort of ad lib here for a few minutes. About a year and a half ago the International Bank of Settlements in Geneva, Switzerland, Mr. Secretary, issued a report. This is the bank that handles capital accounts all over the industrialized world and they had done a study—and I recommend it to you. They had done a study of different rates of productivity and growth in industrialized nations.

What they found and what they had stated in their findings was, I thought, pretty interesting. Let me just read for you the final statement. I am not going over the whole report. It said here, quote: "Regions—regions meaning countries—investing more in infrastructure tend to have higher output, productivity, and employment growth."

So it was not just public moneys being spent. What they recognized was the direct correlation between the investment of those public moneys in infrastructure, the physical infrastructure, and productivity and rates of growth. They pointed out, for example, or at least I extrapolated from their study that, for example, as a percent of output Japan was spending—and here is where I am a little hazy right now.

Senator LAUTENBERG. We have already mentioned that, that it was 23 times.

Senator HARKIN. Oh, you have already mentioned it, it was 23 times and Germany was 15 times. So you have already gone over that.

Senator LAUTENBERG. Yes.

Senator HARKIN. Well, again, I think that indicates that the stimulus package is more than just a one-time shot in the arm to put some people to work. As you know, it is a thing to get this infrastructure built so that the private sector can be more efficient and more productive in the private sector.

So I compliment you, I compliment the President for this stimulus package. I think it is a good stimulus package and I am hopeful that we can move ahead rapidly to enact it and get it through. We, of course, await the House, I guess. I do not know when they are going to work on it. This week, I guess. Is that right?

Senator LAUTENBERG. Is there a hearing soon to be held?

Mr. PEÑA. This afternoon there is one, at least, on transportation.

Senator LAUTENBERG. Mr. Secretary, you are going to find this is relatively easy by comparison. [Laughter.]

Senator HARKIN. That is true. [Laughter.]

Let me just cover a couple or three things, and these may be smaller items in your whole universe that you are covering but they are very big items in rural America. The first is something called the Local Rail Freight Assistance Program. As I said, it is a small program compared to the universe in which you deal, but it has to do with the quality of rural rail lines.

## LOCAL RAIL FREIGHT ASSISTANCE

Let me just say it this way. You have got the big rail companies. They like their main routes where they haul a lot of coal and

freight and it is a big moneymaker for them. And then they have these few spur lines that go out to a lot of rural towns and do not make them a lot of money. They are in disrepair with the speed limits like 10 miles an hour at certain points along the line.

Congress passed this program several years ago to provide some local rail freight assistance. It almost died under the Reagan administration, and sometime I will regale you with the story of how Bermuda helped save the Local Rail Freight Assistance Program. But we kept it going and we put some money into it and it has been a great success story.

Many States, for example, have put moneys to match the Federal moneys. The rail companies put up money. Shippers—local rail companies who have taken over these lines—put up money. The shippers put up money and the State puts up money. So for every dollar of Federal money, you get it leveraged three or four times. And the program has paid off remarkably. They have built up the lines and what happens is, the elevators along the route, the shippers can ship it a lot cheaper than they could by truck. It saves our bridges.

So I just mention that to you because the last administration attempted many times to scuttle the program. I, and other Senators representing rural areas, kept it alive and we have funded it. It has been an effective, well-managed program. It makes a tremendous difference in rural areas and I just urge you to propose that the—and this is not the stimulus package—but that in fiscal year 1994 that it be fully funded at its authorized level of \$30 million. I did not say billion. As I say, this is a small item, but that \$30 million in rural areas means a lot. So I commend that to you and I hope you will take a look at the Local Rail Freight Assistance Program.

Second, on the stimulus package itself, it normally takes about 30 days for the U.S. DOT to work with the States and local governments on prebidding requirements. And again, have you covered this already, Mr. Chairman? I do not know.

Senator LAUTENBERG. No.

#### EARLY START ON STIMULUS PROJECTS

Senator HARKIN. What I want to know is will the Department allow that process to start now on specific, identified projects, so that States and local entities will be able to go to letting as soon as possible after the stimulus package has passed? In other words, if we can work with them now on prebidding requirements, get all that done, so that as soon as the package is passed we can move ahead and get those things let.

Mr. PEÑA. Senator, I am glad you asked that question. I raised that very same question just a couple of days ago and this morning I got a response. We are going to look at what we call the PS&E review process; the plan, specification, and estimate process that we traditionally use to get highway funds out. That normally takes about 2 weeks before the regional office approves it, sends it back to the State DOT, and then they go to advertisement of the project.

We are going to look at that and see if we can speed that process up, very much as you have suggested. We have to be careful here because the stimulus package has not been passed. I think if we

have the conversation with the States in such a fashion that it is all conditioned on the stimulus package passing within a reasonable period of time, we might be able to start this process a bit earlier so that we make sure that the bids get out quicker and we can get the moneys or the contracts executed, or at least the bids received in a more timely fashion so we can meet the 60-day, use-it-or-lose-it period.

Senator HARKIN. Let us go over them one more time, Mr. Secretary, so I can understand it. Now, I do not know all of the requirements. I am not an expert in this field. But, obviously, there are plans, for example, that communities, entities have out there which are ready to go. And they have been approved, they are legitimate projects.

But prior to letting them out for bids, there are certain things that have to go on at U.S. DOT.

Mr. PEÑA. That is right. That is correct.

Senator HARKIN. I am told that usually takes 30 days.

Mr. PEÑA. That is this PS&E process. That is correct. That is what we are talking about.

Senator HARKIN. Let me nail this down. Are you saying that—can you move ahead on that right now? I know this package has not passed. It has not even started yet.

At what point would you go out to these communities and say, OK, or go to your U.S. DOT and say, OK people, start going through this PS&E process, so you get these people ready to go as soon as it has passed. Is that going to happen soon?

Mr. PEÑA. I would like to have that conversation with the regional offices this week, and begin to have a conversation about this. I do not think it has ever been done before, but I think we have got to be creative. We have got to be entrepreneurial.

I keep asking the question, why can we not do it differently? We are going to ask the regional offices, can we begin this process sooner, understanding that there may be some States—although I do not think this will happen. I think States feel very good about this and are willing to go through this process here, even with the possibility that the stimulus package might not pass. But I try to put myself in the position of—

Senator HARKIN. It is going to pass.

Mr. PEÑA. I understand that, Senator, but I am trying to be practical here and just put myself in the shoes of a DOT administrator or the Governor. But I think even with that, there will be enough interest here that we can hopefully find a way to start the process now and so we can save some time. So, we are going to work on that.

Senator HARKIN. I am sort of belaboring this point also because I think there may be a residual benefit to us—a kind of rebound effect. If this process starts to take place out there, then you excite and energize local communities who then excite and energize their local Congressman, if you get my point.

Mr. PEÑA. Yes, sir.

Senator HARKIN. So, I think that process may also help us get the stimulus package through, also. So, I am glad to hear you say that.



Mr. PEÑA. Senator, you said that. I did not say that. Let the record reflect that it was the Senator who said that.

Senator HARKIN. Well, I am glad to hear you say that you are moving ahead on the process and you are going to take a new approach, an entrepreneurial approach to going out and getting these people moving on a PS&E program. I hope you do right away.

#### DISASTER FUNDS

Last, I have a couple questions of local concern. DOT is soon going to make a decision concerning the release of disaster funds. I hope I am not coming too far out of left field on this one, but disaster funds. I want to bring it to your attention.

My State of Iowa has requested \$1.4 million to provide for bridge repair and road stabilization due to a lot of flooding that we had in September. Most of those funds are in Decatur County, IA, perhaps one of the poorest if not the poorest county in my State. Again, it is a small sum of money compared to requests from other States, but I assure you the repairs are critical to our local economy.

If you do not know now, and I know this not part of your testimony, but if you cannot today, could you respond to me perhaps in writing or something, and give me some idea when these funds may be—when the grants will be made for these disasters?

Mr. PEÑA. I can, Senator. I can tell you today that that request is under review now. We will be making a decision fairly soon. Right now, at least, on its face it looks like there are not any problems, but we want to—we will get back to you very specifically in writing about a timeframe when a final decision will be made.

#### ALTERNATIVE FUELS

Senator HARKIN. I appreciate that. And one last thing, Mr. Chairman, if you will indulge me just for a second, since we have the Secretary here. I know you will be coming back in the regular course of events for the regular bill and everything, but looking ahead toward the zero emissions vehicle law in the State of California by 1998. I do not know if you have been taking much of a look at that right now, but I would hope that we might have some opportunities to discuss with you some proposals that might assist not only California in meeting that requirement of zero emissions vehicles.

I think it might set the stage for a lot of other highly polluted areas in cities and the country for picking up on certain technologies as we move along. I just have an intense interest in that area, and I would appreciate the opportunity some time to discuss this with you.

Mr. PEÑA. Senator, I look forward to having that conversation with you. In Denver we started the CNG refueling stations. We have methanol buses in the RTD fleet. We do not have many electric vehicles yet, but this whole area of alternative fuels, for example, and new technology is something that I have an interest in.

And I served as a member of the alternative fuels council, which was appointed as a result of the Alternative Fuels Act of 1988, I believe. I served for 2 years with the automakers and all of the al-

ternative fuels people. I think I have a good sense of some of the challenges in that area, but I think a lot can be done. So, I look forward to having that conversation with you.

Senator HARKIN. Thank you. One of the reasons I wanted to bring that up, Mr. Chairman, is because I know that as mayor of Denver, the Secretary had really moved that city forward in meeting the pollution problems. I would say of all of the individuals who might have been in any line to get to be Secretary of Transportation, I believe that Secretary Peña is the one who has the most knowledge of what it takes to clean up the environment in our cities, at least in vehicular traffic. And I am glad you are where you are.

Mr. PEÑA. Thank you, Senator.

Senator HARKIN. Thank you, Mr. Chairman.

#### SUBMITTED QUESTIONS

Senator LAUTENBERG. Thank you very much, Senator Harkin. Mr. Secretary, free at last. We will submit additional questions to you to be answered for the record.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

## QUESTIONS SUBMITTED BY SENATOR LAUTENBERG

### SUPPLEMENTAL TRANSPORTATION FUNDING FOR FEDERAL-AID HIGHWAYS

SENATOR LAUTENBERG: Mr. Secretary, the President's supplemental proposal calls for an increase of \$2.976 billion in the Federal-aid highway obligation ceiling, which is a 19 percent increase over the FY 1993 enacted level of \$15.3 billion. This increase, if enacted, would bring the Federal-aid highway program up to the full amount authorized in ISTEA. Does the Federal Highway Administration (FHWA) believe that distributing these funds using existing ISTEA formulas will allow States the necessary flexibility to obligate all the additional funds in 1993?

ANSWER: Since the intent is to "fully fund ISTEA," we believe we should use the same obligation limitation formula specified in the Department of Transportation appropriations act for distributing funds authorized by ISTEA. The obligation formula represents a method previously specified by Congress to equitably distribute obligation authority among the States. This, coupled with a redistribution of the increased obligation limitation not used by the States within the initial 60-day period should result in all the increased limitation being used this fiscal year.

SENATOR LAUTENBERG: There has been some confusion over the requirement, and I want to make sure we are all clear on it. Under the 60-day rule, States must have obligated the funds, which means putting those funds under contract. Is that correct? If so, does this to your knowledge violate any existing State procurement or contracting rules that require the bid process on projects to be open for at least 60 days with a follow-on evaluation period that could take another 30 days? If so, what do you propose as a solution to the obstacle presented by such State regulations?

ANSWER: The proposed requirement is that the project be obligated and the bids be received within 60 days after enactment of the special legislation. This does not mean a project has to be under contract within 60 days but rather that the bids are to be received by the State within that time frame. The Federal requirement for the advertising period to receive bids is a minimum of 3 weeks but this can be reduced where appropriate. Several States require longer advertising periods under their own rules or operating procedures but they also have emergency provisions to shorten these time periods where possible.

SENATOR LAUTENBERG: Do you think that not waiving the local match will cause any particular State a problem in obligating their funds? If so, could you tell us which States might have this problem?

ANSWER: A survey taken by American Association of State Highway and Transportation Officials in December 1992 indicated that eleven States may have problems matching additional Federal-aid funds in FY 1993. These States are Connecticut, District of Columbia, Hawaii, Maine, North Carolina, Oklahoma, Rhode Island, South Carolina, Texas, Vermont and West Virginia. However, that survey assumed a much larger funding increase of \$10 billion. The match may be less of an issue under our proposal.

SENATOR LAUTENBERG: Mr. Secretary, some FHWA programs contain some amount of discretionary set-asides (such as Interstate and the bridge program). How will this subset of funding be distributed, or do you intend to keep this money discretionary to be allocated by FHWA?

ANSWER: The increased obligation limitation is proposed to be distributed to the States based on their relative share of apportioned and allocated funds that are subject to obligation limitation that they received to date in FY 1993. This is the same basis on which States received their share of obligation limitation in FY 1993 under the Department of Transportation appropriations act. The proposed increased amount will be available to all accounts subject to obligation limitation.

#### SUPPLEMENTAL APPROPRIATION FOR TRANSIT

SENATOR LAUTENBERG: What was the Department's or OMB's thinking on restricting the \$482 million in section 9, 16, and 18 formula grant funds for capital purposes only, and not allowing them to be used for operating assistance?

ANSWER: The Department and OMB believe the appropriate focus of this proposal is to provide capital assistance in order to create jobs, while increasing the nation's productivity and competitiveness, and decreasing the growing backlog of unfunded capital projects. Increased operating assistance would not address any of these objectives.

SENATOR LAUTENBERG: Also in the transit area, you are proposing a discretionary grant increase of \$270 million. Since these additional bus funds would be discretionary, what guidelines will FTA follow in distributing the \$270 million among eligible projects?

ANSWER: Readiness to proceed, compliance with Federal requirements, and the grantee's ability to encumber funds quickly will be the overriding criteria. In addition, bus replacement and maintenance facility projects will be given priority since they are the two most critical capital needs in the bus program. Equity considerations (a fair allocation of resources geographically and among varying city sizes) will also influence the distribution among the eligible projects.

SENATOR LAUTENBERG: Do you believe these funds will be used only for buses and vans, or might they also be used for bus garages, intermodal facilities or some sort?

ANSWER: These funds will be used mostly for bus and van replacements. Some funds will be used for bus garages. Surveys of pending grant applications show intermodal facilities are a lower priority.

SENATOR LAUTENBERG: Is there a backlog at FTA that can benefit immediately from these funds? Can you share with us the size of that backlog, and how it was identified?



ANSWER: There is a large backlog of applications for capital bus projects on file. These total approximately \$384 million. Of that amount, approximately \$200 million could be encumbered immediately. Much of the FY 1993 discretionary bus program was earmarked for projects that were not yet ready for obligation. Thus, a significant portion of the backlog results from ready-to-go projects that were precluded from FY 1993 funding.

SENATOR LAUTENBERG: If you're telling us that FTA will use the supplemental bus funds to reduce the backlog of projects, what guarantee does the committee have that these projects are of the highest priority?

ANSWER: Our plan is to fund bus replacement and maintenance facilities with these additional funds. These categories have the highest priority. They will replace aging equipment and facilities and result in better service and savings in operating expenses.

SENATOR LAUTENBERG: Has FTA done an estimate of which types of projects will provide the greatest economic stimulus for both the short and long term?

ANSWER: The FTA has not evaluated the economic impact of specific transit projects. However, given that U.S. bus and van manufacturers producing FTA-funded vehicles are operating at only 25-30 percent of capacity, our proposal for increased spending in FY 1993, especially for Discretionary Bus Grants, should have a clear benefit to those companies.

SENATOR LAUTENBERG: Do you intend to set aside any of these general discretionary grants to meet specific federally-mandated areas, such as helping cities meet Clean Air Act standards, or complying with the Americans with Disabilities Act?

ANSWER: The FTA will require that all buses purchased and facility projects constructed will comply with the Clean Air Act and the Americans with Disabilities Act. In order to expedite the use of the stimulus funds, however, special requirements and set-asides were avoided.

#### STIMULUS OPTION: AMTRAK SUPPLEMENTAL FUNDING

SENATOR LAUTENBERG: You have requested \$188 million for Amtrak's capital needs, as part of the stimulus package. Your support for Amtrak is a very refreshing change, given the budget requests we have received from the past administrations. However, Amtrak has identified over \$600 million in capital and Northeast Corridor projects that are necessary and can generate jobs in the near term.

How did you arrive at the figure of \$188 million as the appropriate amount for Amtrak's capital needs?

ANSWER: The Amtrak figure was developed within the constraints of seeking a balanced proposal that addressed

many areas. Additional funding of \$188 million will allow Amtrak to meet priority areas such as equipment overhaul, and station maintenance facility and track improvements.

SENATOR LAUTENBERG: In the budget documentation accompanying the State of the Union message, it states that the \$188 million in new Amtrak capital funds will be available for, among other things, the purchase of new train cars. However, most of the new rolling stock purchased by Amtrak has a very large percentage of foreign content and is primarily assembled outside the U.S. Also, new rail cars are easier to finance than other capital projects.

Do you know how much, percentage-wise, of the FTA bus and Amtrak rail car purchases you have recommended in the stimulus package would be manufactured in the United States?

Does it make sense to use the supplemental funds for new rail cars as opposed to other projects when our objective is to create the maximum number of new jobs in the United States?

ANSWER: Amtrak has indicated that it would not use the additional funds for rail car purchases.

However, the \$188 million package would expand Amtrak's current locomotive order by \$34.5 to \$64.5 million to include the purchase of 10 to 20 more diesel and dual-mode locomotives. The locomotives are domestically manufactured by General Electric in Erie, Pennsylvania, with little, if any, foreign content.

The average age of Amtrak's locomotive fleet is 14 years and the fleet has recently experienced numerous breakdowns. This order will improve reliability and reduce fuel and maintenance expenses as worn out equipment is replaced.

In order to ensure the creation of jobs for Americans, the stimulus proposal will implement existing "Buy America" provisions that apply to both Amtrak and transit procurements. These call for a minimum of 60 percent domestic content, and all final assembly, for rolling stock purchased with Federal funds.

SENATOR LAUTENBERG: Your budget proposals for 1994 and beyond include a number of initiatives to expand high-speed rail service. However, Amtrak will need considerable capital funding just to maintain the current level of service. In the absence of adequate appropriations, Amtrak has embarked on a massive borrowing program to meet its unmet capital needs.

Are you at all concerned about the growing portion of Amtrak's operating budget that will be going toward debt service?

ANSWER: Amtrak has stated that it could provide private financing for 50 percent of its \$2.4 billion multiyear equipment replacement program. This debt would not be fully on-line until around the year 2000 at which point the principal plus interest would amount to only

about 4 percent of total expenses. This appears to be a reasonable level of debt service for a company the size of Amtrak.

SUPPLEMENTAL APPROPRIATION FOR FEDERAL  
AVIATION ADMINISTRATION'S AIRPORT IMPROVEMENT  
PROGRAM (AIP)

SENATOR LAUTENBERG: The Administration has proposed adding \$250 million to the fiscal year 1993 appropriation for FAA's Airport Improvement Program (AIP). The current level for the program is \$1.8 billion. Thus, the proposed supplemental appropriation would be an increase of about 14 percent.

The chief purpose of the AIP is to help fund development projects at any of the nation's nearly 3,500 airports eligible to receive such funding. Projects that are eligible for AIP funding include those that will enhance airport safety, capacity, and utility.

Since the additional 1993 funds are discretionary, how will FAA distribute the \$250 million among eligible projects?

ANSWER: To ensure the funds are obligated fully this fiscal year, we propose not to follow the normal set-aside criteria for the discretionary funds. Thus, the criteria for distribution have been established as follows:

- construction or procurement can be started in 60 days
- projects meet valid airport development requirements
- projects create jobs
- projects can be completed quickly to maximize economic stimulus

SENATOR LAUTENBERG: Have projects already been identified that can make effective use of the additional funds?

ANSWER: Yes. FAA has worked with its regional offices to identify projects that can make effective use of additional funds. In addition, the regions have discussed some projects with sponsors to assure that work can be started quickly. However, it should be noted that we do not have a predetermined list of the recipients of the \$250 million requested for AIP.

SENATOR LAUTENBERG: Is there a backlog of projects that can benefit immediately from these funds? What is the size of that backlog and how was it identified?

ANSWER: Yes. FAA identified about \$1.2 billion in projects that were projected to be able to start by the end of the fiscal year. The list was developed by reviewing airport sponsor existing applications and potential projects.

SENATOR LAUTENBERG: If FAA plans to use the supplemental funds to help fund the backlog of projects, what guarantee is there that these projects are the highest priority and will provide the most benefit to the airport system?

ANSWER: The projects that would be funded in the supplemental are those that were not reachable under the \$1.8 billion level this year. The projects would still have to meet Federal Criteria.

SENATOR LAUTENBERG: In distributing the supplemental funding, will FAA adhere to the same earmarked categories (relievers, noise, safety, etc.) as it does for the regular program? Or will a specific project type (safety, capacity, rehabilitation, upgrade) be a focus of the supplemental funds?

ANSWER: The FAA is proposing to allocate the supplemental funds as purely discretionary funds with no earmarking for relievers or noise. We believe this to be the most efficient way to quickly target funds to priority projects. FAA will focus on safety, capacity, rehabilitation and upgrade projects, and will also consider sound proofing projects since they also create jobs. All types of airports (commercial service, general aviation and reliever) will be considered.

SENATOR LAUTENBERG: Would supplemental funds be targeted to high unemployment areas?

ANSWER: Supplemental funds would not specifically be targeted to high unemployment areas, but many of the targeted projects are in major metropolitan areas that generally have higher unemployment levels.

SENATOR LAUTENBERG: Will a specific airport type or size be a focus of the supplemental funds?

ANSWER: No. All airport types will be considered.

SENATOR LAUTENBERG: Which types of projects do you believe will create the most economic stimulus? Will these projects be a specific focus?

ANSWER: Projects that create the most economic stimulus include runway, taxiway and apron pavement to create construction jobs and procurement of equipment to create manufacturing jobs. These projects will be a specific focus of the supplemental funds.

SENATOR LAUTENBERG: Will steps be taken to ensure that each FAA region receives some minimum share of supplemental funds?

ANSWER: Since there are eligible projects in all regions, we expect to achieve a balance of projects among the regions.

SENATOR LAUTENBERG: What do you estimate are the immediate benefits to the economy from these supplemental funds?

ANSWER: The immediate benefits are the creation of construction and manufacturing jobs.

SENATOR LAUTENBERG: Do you have estimates of the impact on employment that airport improvement projects can have? What is the basis of your estimate?



ANSWER: We estimate that the AIP supplemental funds will create about 3,000 direct and indirect jobs through FY 1994 and about 6,000 jobs through FY 1997. The estimate is based on the assumption that each \$100,000 million creates about 2,400 jobs.

SENATOR LAUTENBERG: According to current AIP policies, safety projects at large airports are among the highest priorities and capacity projects at small airports are among the lowest. Does FAA intend to use these same policies to distribute supplemental funds? Please specify the type of projects that would be eligible and the criteria to be employed in review proposals.

ANSWER: FAA would rely on the criteria currently used that would ensure that safety, security and standards projects receive first priority, followed by projects that enhance capacity. All categories of airports should be able to compete successfully for existing funds. Projects that would be eligible include pavement, reconstruction, construction, lighting and procurement of equipment. Projects that would not be eligible include purchase of land for noise mitigation.

SENATOR LAUTENBERG: We have heard that FAA has identified about \$1.3 billion in airport development projects that it believes are "ready to go." If that is the case, why is the Department not willing to go along with that general magnitude of stimulus to the airport infrastructure?

ANSWER: FAA had identified about \$1.2 billion in projects that could begin work by the end of the fiscal year. The basis for the \$250 million is that it allows for full funding of the authorized level in FY 1993, and it includes projects that we are confident could be placed under construction quickly during the construction season so that the benefit of the stimulus would be realized immediately.

SENATOR LAUTENBERG: We understand that FAA may limit the number of projects to minimize its administrative burden. This would lead to a concentration of supplemental funding. Does FAA intend to select fewer projects for administrative purposes?

ANSWER: No. The administrative burden will not be a consideration in the selection of projects.

SENATOR LAUTENBERG: The subcommittee is concerned that the supplemental federal funds will be used by airport operators to pay for projects that otherwise would have been paid for using local funds. What steps would FAA take to ensure that the supplemental funds would create additional jobs, not just substitute federal funds for local funds?

ANSWER: The projects to be funded by the supplemental are those that would have been funded in FY 1993, if funds were available. There is no reason to

believe that they are projects that otherwise would have been paid for using strictly local funds.

SENATOR LAUTENBERG: Given statutory limits on supplemental appropriations, selected projects would have to begin this fiscal year. Does FAA intend to waive any Davis-Bacon or minority business rules, public participation mandates, and other procedural steps that could delay a project's commencement?

ANSWER: No. FAA does not intend to waive any Davis-Bacon or minority business rules, public participation mandates, or other procedural steps. FAA is targeting projects where environmental work is complete and other requirements have been met or can readily be met.

#### ELIMINATING LOW PRIORITY PROGRAMS AND PROJECTS

SENATOR LAUTENBERG: As part of the overall package, the President proposes to save, over the next five years, almost \$2 billion (\$1.75 billion) by eliminating "low priority" programs.

Mr. Secretary, would you give us an idea of which Transportation programs you consider low priority? And why, in comparison to other programs, do you believe that they rank low on the priority listing?

ANSWER: The programs included in the category of low priority include such items as highway demonstration projects that are appropriated each year, Conrail Commuter Assistance and Amtrak Corridor Loans. These are considered low priority because they are programs or projects that could be funded through our regular grant programs and hence do not justify separate funding.

SENATOR LAUTENBERG: What criteria were used in assessing transportation programs priority? How were these criteria developed? Were they applied evenly across all the transportation agencies?

ANSWER: Our top priority in developing the budget proposals was to fund the Federal-aid highway program at the authorized levels and increase funding in our other infrastructure grant programs. In order to meet that goal as well as contribute to the Administration's deficit reduction efforts, it was necessary to hold other programs at the FY 1993 enacted level or to propose no new funding in FY 1994 and beyond.

SENATOR LAUTENBERG: Did the Department or OMB consider as "low priority" the single purpose highway projects contained in ISTEA? If not, why not?

ANSWER: Yes. The Administration considered prohibiting obligation of funds for any highway demonstration projects. This approach would have affected the ISTEA projects.

SENATOR LAUTENBERG: In putting the fiscal year 1993 appropriations bill together, because of the budget

constraints faced by the subcommittee, the regular federal-aid highway program's obligation ceiling was reduced 16 percent from the authorized level; yet the demonstration programs and the minimum allocation program, which are all outside the ceiling, received no reduction. If faced with budget reductions, do you believe that these highway programs should all be on equal footing?

ANSWER: Exempting from the obligation limitation the minimum allocation and the ISTEA-authorized demonstration projects is consistent with ISTEA and the annual appropriations acts for the Department. However, one of the problems that results from this exempt status is that those programs tend to obligate more slowly than the core programs under the obligation limitation. Hence, there is a risk of overstating the outlays associated with exempt programs if, in fact, the obligation is lower than estimated.

#### FUTURE INVESTMENT IN HIGH-SPEED RAIL

SENATOR LAUTENBERG: The budget documentation submitted with the State of the Union message highlights the Administration's support for expanded high-speed rail service, something I have been advocating for several years. The budget proposes to establish public/private partnerships to expand high-speed rail service.

You are proposing to exempt State bonds for high-speed rail projects from the State private activity bond volume caps, beginning in 1995. This proposal will cost the government \$36 million through 1997 in foregone tax revenue.

What amount of private sector bond financing do you estimate will become available through this new proposal? How many new rail systems do you estimate will float high-speed rail bonds?

ANSWER: The most promising candidate for this type of financing is the proposed Texas TGV system. In May 1991, the Texas High Speed Rail Authority awarded a franchise to the French-led consortium Texas TGV to develop a 200 mph high speed rail system linking Dallas, Houston, San Antonio and Austin. Under the terms of the franchise, construction is to begin by May 1997. As originally planned, Texas TGV was to begin final design work in November 1993 and begin construction in November 1994. However, the environmental and ridership studies were delayed, and the franchisee has not yet raised the financing that was required in the financing plan. The financing plan calls for \$3 billion in tax free bonds to be issued beginning in 1995.

SENATOR LAUTENBERG: What is the rationale for delaying implementation of this tax proposal until 1995?

ANSWER: The tax advantage is not needed until FY 1995. Texas is the most promising candidate and the bonds for this project would not be issued until 1995.

SENATOR LAUTENBERG: In addition to this additional private sector funding, your budget documents propose to expand investment in high-speed rail systems by almost \$1.3 billion by 1998. The documents state that these funds could be used for the start-up of private or State/local high-speed rail projects, not just the development of a Maglev prototype as called for in ISTEA.

Does the Administration plan to submit new authorizing legislation for a new program of this kind?

ANSWER: We are still formulating the details of the program. However, we expect to submit new legislation.

SENATOR LAUTENBERG: How do you intend to distribute the funds? Will they all be funnelled through Amtrak?

ANSWER: No, the funds would not be funnelled through Amtrak. While the program details have not been finalized, we anticipate that funds would be made available to public and private entities. Since currently Amtrak operates passenger rail service in many potentially high speed rail corridors, applicants will be encouraged to coordinate with Amtrak in the development of high-speed rail programs.

SENATOR LAUTENBERG: Will States be required to put up matching funds to receive this funding?

ANSWER: The program will be designed to support State, local and private sector projects and it is reasonable to expect that recipients of the Federal funds share in the project costs.

SENATOR LAUTENBERG: Will all of the funds be derived from the Highway Trust Fund, or any other trust fund?

ANSWER: A portion of the funds will be financed from the Highway Trust Fund.

#### COAST GUARD ACQUISITION MANAGEMENT

SENATOR LAUTENBERG: You are proposing to cut civilian positions in all DOT agencies. I understand there will not be a reduction of military staffing in the Coast Guard. For many years, we have been encouraging the Coast Guard to hire more civilians in its acquisitions office to provide more continuity and expertise. Will the Coast Guard now be required to fire many of the civilians that they have recently hired in response to our recommendations?

ANSWER: No. Our firm intention is to achieve the lowered civilian FTE targets through attrition rather than through firings. The Coast Guard intends to achieve the reductions primarily in accounts other than in the Acquisition, Construction, and Improvements appropriation, particularly in the Operating Expenses account.

We concur with the Committee in the desirability for more continuity and expertise in Coast Guard's acquisition staff.



Bringing in more civilians has been one part of the solution. But Coast Guard has also been attacking the problem by working to increase the lengths of military tours in acquisition and through more comprehensive training of military personnel assigned as project managers in acquisition.

The Coast Guard has made progress in building expertise. The formation of the Office of Acquisition in 1986 has resulted in a cadre of experienced military acquisition personnel, many of whom have had two tours in the area.

#### EFFECT OF PAY FREEZE/PERSONNEL CUTS

SENATOR LAUTENBERG: As you know, the budget proposes to implement a pay freeze for all civilian and military DOT personnel in FY 1994. Are you concerned about the Department's ability to retain quality personnel when we are taking away their cost of living increase for 1994?

ANSWER: No. The pay freeze represents a relatively small amount of money for most employees, especially after taxes and other deductions. Since employees are motivated by many factors besides pay, it seems unlikely that this measure will cause a significant number of quality employees to leave. The President's economic plan calls for all Americans to contribute to the changes that are needed, and for the government to make the first contribution as an example for others. History suggests that most Federal employees will understand and support this principle.

#### MAINTAIN "LEVEL" FAA ADMINISTRATION

SENATOR LAUTENBERG: The President's economic stimulus program proposes to achieve a significant measure of savings under the heading of "managing government for cost-effectiveness and results." In this category, the program proposes to save between \$55 million and \$62 million annually through 1988 by maintaining existing FAA operating levels in the face of slowed aviation traffic growth.

While a somewhat effective tactic, keeping the operating costs constant across a whole agency over a 5-year period might be used if no other more program-specific means could be developed to achieve the same savings. In fact, nowhere else in the stimulus program, except in the case of the "small agencies" line item, is the level-cost tactic used to achieve reductions. Why has the OMB singled out FAA as the only large agency to face a cost-cap instead of a more reasoned targeting of the agency's relatively lower priority program areas, as was apparently done for all other large agencies?

ANSWER: The FAA's Operations account is the Department's largest operating account. There are significant savings to be achieved in this area.

SENATOR LAUTENBERG: I realize that cutting specific programs within an agency is more difficult, time-consuming, and analytic exercise than making a broad-based agency-wide cost reduction. What accounts for this broad-based approach, rather than distinguishing among programs that are valuable as opposed to just marginal? Could you have done a better job of identifying marginal or fat programs in FAA if you had more time?

ANSWER: OMB's broad-based approach gives FAA the flexibility to review the Operations programs and apply the savings in areas that will not jeopardize the safety of the airway system.

#### CHARGING FEES FOR GOVERNMENT SERVICES

SENATOR LAUTENBERG: In the area of transportation, the President's economic stimulus package proposes to make owners of general aviation aircraft contribute more to the upkeep of the aviation system by increasing the registration fee on these aircraft. This is one of only two fees proposed for increase across the whole transportation sector. Moreover, the stimulus package proposes to increase the general aviation fee from its current level (sources provide varying information on current level, between \$5 and \$30) to \$90 in 1994 with a \$60 increase every year until a final fee level of \$270 is reached in 1997.

As part of an economic stimulus package, this kind of action raises some questions, because a significant portion--about 62,000--of this nation's 265,000 general aviation aircraft are used by private businesses as integral parts of their operations. How do you justify increasing this fee in 1994 and in all the years into the foreseeable future? Have you run this past the general aviation interests and, if so, what were their reactions?

ANSWER: The rationale for increasing the registration fee is based in large part on cost allocation studies that indicate that while the general aviation industry incurs about 26 percent of the cost of the airspace system, it contributes only about 7 percent toward the financing of those costs. While other user fees in the transportation area have increased in recent years, there has been little change in the general aviation fees. We did not consult with the general aviation interests in developing this proposal.

SENATOR LAUTENBERG: What other fees did you consider for increase before you finally decided on the general aviation aircraft registration fee as the best candidate? What was your reasoning for not increasing these fees?

ANSWER: We looked at raising the user fees now paid by other modes of transportation and also the airline industry. The decision to raise the fee on general aviation aircraft took into account that most other user fees were increased in 1990.

## POLITICAL APPOINTEES AND CIVIL SERVICE

SENATOR LAUTENBERG: Please supply for the record the name, position, office, and salary of all individuals currently employed as career civil servants in the Department of Transportation who at one time served as political appointees in the Department of Transportation or any other agency in the last twelve years. Please also note their position and salary during their service as a political appointee.

ANSWER: The information follows:

CONVERSIONS OF FORMER POLITICAL APPOINTEES  
1981 TO DATE

1981

<u>NAME</u>	<u>TYPE OF CASE</u>	<u>OPER. ADMIN.</u>	<u>POSITION TO WHICH APPT.</u>	<u>CURRENT POSITION</u>
Douglas Anderson	Ramspeck	RSPA	Attorney GS-14	Attorney GM-15
Joanne Underwood	Sch C	FRA	Secretary GS-9	Special Asst. GM-14

1982

<u>NAME</u>	<u>TYPE OF CASE</u>	<u>OPER. ADMIN.</u>	<u>POSITION TO WHICH APPT.</u>	<u>CURRENT POSITION</u>
Martha Long	Ramspeck	FAA	Secretary GS-7	No longer at DOT

1983

<u>NAME</u>	<u>TYPE OF CASE</u>	<u>OPER. ADMIN.</u>	<u>POSITION TO WHICH APPT.</u>	<u>CURRENT POSITION</u>
Dennis Deutschl	Sch C	SLSDC	Pub. Affairs Sp. GS-14	Same
Michael Baldwin	Sch C	NHTSA	Highway Safety Sp. GS-13	Same



1984

<u>NAME</u>	<u>TYPE OF CASE</u>	<u>OPER. ADMIN.</u>	<u>POSITION TO WHICH APPT.</u>	<u>CURRENT POSITION</u>
William Shea	SES NC	FAA	Communications Resource Manager GS-15	No longer at DOT

1985

<u>NAME</u>	<u>TYPE OF CASE</u>	<u>OPER. ADMIN.</u>	<u>POSITION TO WHICH APPT.</u>	<u>CURRENT POSITION</u>
None				

1986

<u>NAME</u>	<u>TYPE OF CASE</u>	<u>OPER. ADMIN.</u>	<u>POSITION TO WHICH APPT.</u>	<u>CURRENT POSITION</u>
Linda Strine	Ramspeck	FHWA	Program Anal. GS-11	Prog. Mgt. Sp. GM-14 (OST)
Nina Showalter	Sch C	MARAD	Fleet Admin. Systems Coord. GS-11	Prog. Oper. Sp. GS-12

1987

<u>NAME</u>	<u>TYPE OF CASE</u>	<u>OPER. ADMIN.</u>	<u>POSITION TO WHICH APPT.</u>	<u>CURRENT POSITION</u>
Charlotte Boeck	Sch C	OST (C)	Admin. Officer GM-13	Admin. Officer GM-14
Dorothy Powell	Ramspeck	UMTA	Program Anal. GM-14	No longer at DOT
William Callicott	Ramspeck	NHTSA	Pub. Affairs Sp. GS-12	No longer at DOT
Sandra Jones	Ramspeck	FAA	Secretary GS-6	Consumer Affairs Analyst GS-11
James Bynum	Ramspeck	UMTA	Director, Office of Pub. Affairs GM-15	No longer at DOT
Mary Thomas	Sch C	FAA	Secretary GS-8	Same
Timothy Hurd	Ramspeck	NHTSA	Pub. Affairs Sp. GM-14	Same
John Hanks	Sch C	FAA	Pub. Affairs Sp. GS-14	No longer at DOT
Winifred Woodward	Ramspeck	FAA	Program Anal. GS-14	Deputy Regional Admin. SES

1988

<u>NAME</u>	<u>TYPE OF CASE</u>	<u>OPER. ADMIN.</u>	<u>POSITION TO WHICH APPT.</u>	<u>CURRENT POSITION</u>
Jeanne Smith	Sch C	OST (S)	Special Asst. GM-15	Same
Patrick Cariseo	Ramspeck	FAA	Pub. Affairs Sp. GS-13	Sup. Media Communications Sp. GM-14
Erman Cocci	SES NC	SLSDC	Asso. Admin. for Mgt SES	Asso. Admin/Resident Manager SES
George Luciano	SES NC	NHTSA	Program Mgr. GM-15	Same
Marguerite Christensen	Sch C	OIG	Admin. Officer GS-12	No longer at DOT
Karen Dodge	Sch C	NHTSA	Highway Safety Sp. GS-13	No longer at DOT
Kathryn Rizzardi	Sch C	FAA	Secretary GS-10	No longer at DOT

1989

<u>NAME</u>	<u>TYPE OF CASE</u>	<u>OPER. ADMIN.</u>	<u>POSITION TO WHICH APPT.</u>	<u>CURRENT POSITION</u>
Rosemary Woods	Ramspeck	UMTA	Program Analyst GM-13	Program Analyst GM-14
Susan Laufer	Wh House	FHWA	Transport. Sp. GM-15	Asso. Dir. for IVHS Policy and Coord. SES

Special Programs Sp.  
GM-301-14 (OST-M)

Program Analyst GS-12  
(Temporary)

RSPA

Sch C

Suzette Paes

Same

Staff Asst. GS-12

RSPA

Sch C

Amy Stearns

1990

CURRENT  
POSITION

POSITION TO  
WHICH APPT.

OPER.  
ADMIN.

TYPE OF  
CASE

NAME

Policy Analyst GS-13

Policy Analyst GS-12

RSPA

Ramspeck

Andrew Johnsen

Program Analyst GM-15

Program Analyst GS-14

FAA

Sch C

Kenneth Peppard

Military Airports  
Prog. Off. GM-15

Spec. Asst. to Deputy  
Administrator GM-15

FAA

Sch C

Ronald Webb

186

1991

CURRENT  
POSITION

POSITION TO  
WHICH APPT.

OPER.  
ADMIN.

TYPE OF  
CASE

NAME

Program Analyst GM-14

Executive Asst. GM-15

UMTA

Ramspeck

Katherine Webb

Same

Pub. Affairs Sp. GS-14

SLSDC

Ramspeck

Ginger Vuich

Media Communic. Sp.  
GS-13

Media Communic. Sp.  
GS-12

FAA

Sch C

R. Fraser Jones



1992

<u>NAME</u>	<u>TYPE OF CASE</u>	<u>OPER. ADMIN.</u>	<u>POSITION TO WHICH APPT.</u>	<u>CURRENT POSITION</u>
Linda Hammer	Sch C	FAA	Program Analyst GS-12	Intl. Aviation Plan. Sp. GS-13
Erlinda Casey	Wh House	OST (S)	Executive Asst. GS-14	No longer at DOT
Bridget Montagne	Wh House	OST (A)	Asso. Dir. for Industry Affairs GM-14	Same
Susan Slye	Wh House	FHWA	Special Asst. to Exec. Director, GM-14	Same
Lorie Dankers	Sch C	OST (A)	Pub. Affairs Sp. GS-7	Same

1993

<u>NAME</u>	<u>TYPE OF CASE</u>	<u>OPER. ADMIN.</u>	<u>POSITION TO WHICH APPT.</u>	<u>CURRENT POSITION</u>
Lorraine Howerton	Ramspeck	OIG	Management Anal. GM-14	Same

# QUESTIONS SUBMITTED BY SENATOR SASSER

## NASHVILLE - LONDON AIR SERVICE

SENATOR SASSER: Mr. Secretary, as you know, Nashville is one of the largest airline hubs in the country without non-stop service to London. Nashville would serve as an excellent option for passengers from 74 U.S. cities to continue their travel to London. Nashville has a great need for improved air access to Europe, and this route would further assist Nashville in its efforts to expand international service as well as provide an important economic boost to the City and the surrounding region.

I certainly realize that the existing bilateral agreement between the United States and the United Kingdom is very restrictive; however, the region comprised of Tennessee, Kentucky, Alabama, and Mississippi is the only region in the country that does not possess gateway service to London. Nashville is attempting to increase its role in international markets, but lack of non-stop service to London is a hindrance to this planned economic development.

While it is certainly encouraging to see the adoption of bilateral policies in which other countries offer equal access to their markets, I remain very concerned about the outcome of the liberalization talks that have been underway for some time between the United States and Great Britain. These talks have reached a virtual standstill at times because the British government--which severely restricts access to the United Kingdom by U.S. carriers--has consistently taken the position that it does not need additional access to U.S. airports. Therefore, it would appear they have no incentive to negotiate.

Mr. Secretary, it is crucial that we take the necessary steps to strengthen the position of U.S. aviation in the global marketplace. Accordingly, I am interested in what steps the Administration is prepared to take to pursue an agreement with the United Kingdom that will ensure reciprocity for U.S. airlines in the British market and that includes the allowance of service to Stansted from Nashville.

ANSWER: As you recognize, the bilateral aviation agreement with the United Kingdom is extremely restrictive. I can assure you that one of my priorities is to reinvigorate the liberalization talks with the British to incorporate new opportunities that will allow cities, such as Nashville, to have the air service links that contribute to their economic development. As a first step in that process, I have contacted my counterpart John MacGregor, U.K. Secretary of State for Transport, and we anticipate meeting in April to discuss a broad range of transportation issues. I have let him

know of my particular interest in liberalizing the aviation relationship. It is my hope that resumed negotiations will lead to an agreement that permits unrestricted service to Nashville, and other cities, by airlines of both countries.

#### EFFECT OF BTU TAX ON HIGHWAY TRUST FUND

SENATOR SASSER: One of the most critical aspects of the Intermodal Surface Transportation legislation was its integration of transportation, energy, and environmental policies. As you know, prior to that legislation, transportation policy, for the most part, was developed independent of energy and environmental agendas.

I applaud the Clinton Administration effort to increase the highway obligation authority. However, one of the concerns of the Tennessee Department of Transportation and other state DOTs is how the implementation of the energy tax with its BTU measurement will affect the Highway Trust Fund in the out years, i.e., 1995 and 1996. How would you respond to those concerns?

ANSWER: The broad base of the tax will keep the rate low and spread the effects across regions, industries, and consumer segments. When fully phased in, the tax will increase the price of gasoline by about 7.5 cents per gallon, or 5 percent, assuming the producer passes on the full cost to the consumer.

We estimate the short-run demand elasticities to be relatively inelastic (in the range of  $-.15$  to  $-.2$ ). Thus, we expect the proposed tax would have only about a one percent impact on the quantity of motor fuel demanded, producing about \$160 million less in Highway Trust Fund revenues annually once the tax takes full effect in July 1996.

Treasury's revenue assumptions for the Highway Trust Fund take into account the impact of the BTU tax.

#### HIGH SPEED RAIL AND AMTRAK

SENATOR SASSER: Increased funding for High Speed Rail and Amtrak are integral to the Clinton Administration's Transportation Supplemental. In fact, reference was made to these areas in an article in this past Sunday's Washington Post.

Since much of the emphasis of high speed rail can be expected to be focused in the congested Northeast Corridor and, to some extent, out West, how would the Administration anticipate integrating high speed rail to meet the transportation needs of "Middle America", particularly in the South, where travel is almost exclusively by passenger car?

ANSWER: We are still developing our plans for the High Speed Rail and Maglev program, which is among the

President's investment proposals for fiscal years 1994 through 1997. We do not foresee a problem in meeting the transportation needs of the various regions of the nation.

Because the rail improvements between Washington, D.C. and the Northeast High-Speed Rail Improvement Project (between New York to Boston) are already funded under a separate appropriation, we would not expect that the increased funding for high speed rail and maglev would be targeted on the Northeast Corridor. Rather, there are at least five corridors in different regions of the country that could be viable for the development of high speed rail. Potential high speed rail corridors would link Chicago with Detroit, Milwaukee and St. Louis and would also provide linkages between San Diego and Sacramento; Washington D.C. and Atlanta; Miami and Tampa via Orlando; and Eugene, Oregon and Vancouver, B.C.

SENATOR SASSER: Also in last Sunday's Post article, you were quoted, Mr. Secretary, as saying "We do it with Amtrak". This was in response to a question regarding more government involvement in rail.

As you know, the only Amtrak service through a major city in Tennessee is Memphis. The City of Memphis has undertaken a major renovation of Central Station which serves Amtrak. Upon completion, Central Station is expected to be a premiere intermodal facility. One concern, however, is the lack of Amtrak service through Memphis. Currently, there are only two trains per day going North and South to Chicago and New Orleans, respectively. Can the City of Memphis expect the Clinton Administration to support improved and increased Amtrak service to other cities from Memphis?

ANSWER: We are not planning specific route or service expansions for Amtrak; we see that as Amtrak's responsibility to plan and implement on the basis of cost and revenue analysis. The Administration is committed to supporting Amtrak, as is demonstrated by the inclusion of \$188 million in capital funding in the stimulus package and maintaining current levels in the future.

SENATOR SASSER: At one time, Amtrak operated a Floridian route from Chicago to Florida with an intermediate stop in Nashville. This service, however, was terminated in 1979. There is tremendous public support for restoration of service from Chicago to Florida via Evansville, Nashville, Chattanooga, Atlanta, and other cities. In light of the Administration's commitment to rail, and Amtrak in particular, I'd like a commitment that the Administration will reassess the market potential for this route and review carefully the capital improvements necessary for restoration of service.



ANSWER: As a member of the Amtrak Board, I will be involved in the review of the potential market, capital requirements, and other financial considerations of any proposed new Amtrak route.

#### INTERSTATE 69

SENATOR SASSER: Returning for a moment to highways, I'd like to bring to your attention an exciting multi-state effort that has tremendous economic potential for the nation--expansion of Interstate 69, also known as the Mid-Continent Highway. Interstate 69 currently originates at the Canadian border from Northern Michigan and extends to Indianapolis.

The Mid-Continent Highway Coalition, which consists of representatives from Tennessee, Arkansas, Mississippi, Michigan, Indiana, Kentucky, Louisiana, and Texas, was formed to coordinate expansion of the southern leg of I-69. Interstate 69, in fact, was designated as a high priority corridor in the Intermodal Surface Transportation Efficiency Act of 1991. The proposed Southern extension would link such key cities of Memphis, Shreveport and Houston.

I know that this is an effort that President Clinton has been very much involved. The final report of the Lower Mississippi Delta Commission was headquartered in Memphis and chaired by then Governor Bill Clinton. The Commission concluded that "lack of quality transportation is severely hampering economic expansion and growth in the Mid-South". Expansion of the southern leg of I-69 would "link 100 economically depressed counties by facilitating a more efficient urban-rural distribution of manufacturing, transportation, communications, and public utilities activities". The entire I-69 route would incorporate 40% of the nation's manufacturing base.

I would urge the Administration to give expansion of Interstate 69 its highest consideration. What are your preliminary thoughts regarding the economic potential of expanding I-69?

ANSWER: The Department of Transportation has not made any assessment of the economic potential of expanding I-69. Existing legislation does not permit the Department of Transportation to add routes to the Interstate System except when requested by the States under 23 U.S.C. 139. This provision allows States to construct a route to Interstate standards using their regular Federal-aid funds and/or State funds and then request that the route be added to the Interstate System. No new funding is made available to the States as a result of such an action.

As you noted, a high priority corridor extending from Indianapolis, Indiana, to Houston, Texas, via

Memphis, Tennessee and Shreveport, Louisiana, was identified in the Intermodal Surface Transportation Assistance Act of 1991, as amended; therefore, it will be included on the proposed National Highway System (NHS) that must be submitted by the Department of Transportation to Congress.

It will be up to the States to determine the feasibility of constructing an Interstate-type facility in this corridor. The ISTEA authorizes a limited amount of funds (\$8,000,000 per fiscal year through FY 1997) to carry out feasibility and design studies for high priority corridors. These funds have been allocated for FY 1992 and FY 1993. The Federal Highway Administration will be requesting proposals from the States for the use of the FY 1994 funds later this fiscal year.

### RURAL TRANSPORTATION STRATEGY

SENATOR SASSER: I was pleased to see the Clinton Administration's commitment to mass transit in its supplemental package. One of the areas that has always caused me great concern in recent transportation budgets has been the disproportionate impact of reductions in the mass transit account on the poor, elderly, and transit dependent rider. The impact of these reductions has been especially harsh in rural communities.

Despite the larger population centers of Memphis and Nashville, Tennessee is primarily a rural state. In developing its long-range transportation policies, will the Administration also develop and implement a rural transportation strategy to improve transportation access in these communities?

ANSWER: In developing our long-term policies, the transportation needs of rural communities will be addressed. As you may know, we have a specific program to improve access to transportation in rural communities through Section 18 of the Federal Transit Act. This program permits States to fund rural transportation and intercity bus services and is funded at \$91 million in fiscal year 1993. The additional funds proposed for FY 1993 will increase this amount by \$24 million.

Additional funding opportunities available through the Intermodal Surface Transportation Efficiency Act offer unprecedented funding flexibility. The Surface Transportation Program (STP) for fiscal years 1992-1997, authorizes nearly \$24 billion dollars that may be used by States to fund highway and transit projects. A substantial portion of this funding may be used for rural areas. The programming of ISTEA monies is done at the State level. Rather than predetermining uses, this approach grants each State a greater ability to determine which programs and services best meet the needs of its urban areas and rural communities.

DOT is also very active in the Rural Development

Initiative which entails close coordination among federal agencies to support state and rural areas' efforts to enhance the development of nonurbanized communities.

We believe that all of these approaches will contribute to better serving the transportation needs of citizens in rural communities throughout America.

## QUESTIONS SUBMITTED BY SENATOR MIKULSKI

### AIRPORT SURVEILLANCE RADARS

SENATOR MIKULSKI: In January, I wrote to OMB Director Leon Panetta to express the hope that President Clinton would include in his supplemental appropriation request \$46 million to allow the Federal Aviation Administration to exercise its existing contract option to procure eleven Airport Surveillance Radar (ASR-9) systems in early 1993. Unfortunately, these funds have not been included in the President's request.

Many airports around the country are eagerly awaiting the installation of these systems, but FAA has so far failed to procure sufficient numbers to meet this demand. This procurement could be carried out immediately and would mean the preservation of a highly skilled production line and more than 1,000 American jobs. It would also contribute to the modernization of the National Airspace System, which is pivotal to the United States' position in global economic competition.

I have taken a long-standing interest in this matter for two reasons. First, these radar systems are constructed in Maryland, providing jobs for a skilled workforce and an opportunity for a major defense contractor to diversify into civilian technology. Second, I am confident of the quality of these radar systems, one of which provides excellent service at Baltimore-Washington International Airport.

Can you tell me whether my request was considered for inclusion in the President's request, and why it was not included?

ANSWER: Funding for additional ASR-9 radars is not part of the President's FY 1993 stimulus proposal. The stimulus funds are focused on our grant programs. The Department is currently reviewing the air traffic control modernization and consolidation effort. The determination of whether additional radars are required in the future will depend on the outcome of that review.

SENATOR MIKULSKI: Also, do you plan to do anything to advance this matter with the FAA? I understand FAA has a large balance of unobligated funds already appropriated in its facilities and equipment (F&E) account. What are the chances of a reprogramming request in the near future to put some of these funds to

productive use by purchasing additional ASR-9 radar systems?

ANSWER: FAA does have a large balance of unobligated F&E funds --- \$1.98 billion at the end of FY 1992. These funds, however, were appropriated and are committed for specific projects. There are no plans at this time to request reprogramming to purchase additional ASR-9 radar systems.

## QUESTIONS SUBMITTED BY SENATOR D'AMATO

### ENGINEERING AND DESIGN WORK

SENATOR D'AMATO: Can any of the new supplemental highway funds be used for engineering and design work, including estimates of projects? Does the "bid in hand" requirement mean that the funds are only for construction?

ANSWER: The increased obligation limitation is generally available for use only for the physical construction phases of a project. It can not be used for the preliminary engineering or right-of-way phases of a project unless such work is essential to allow the project to advance to receipt of bids in the 60-day period.

SENATOR D'AMATO: In New York State fifty-percent of the highway engineering work is done by outside design engineers under negotiated contracts. Would such contracts be eligible for funding under the new monies?

ANSWER: The increased obligation authority is not available for preliminary engineering work, regardless of whether it is accomplished by State or consultant forces, unless it is essential to allow a project to advance to receipt of bids in the 60-day period. Considering the time involved in negotiating consultant contracts, this likely precludes the use of the increased obligation limitation for consultant design engineering under any circumstances.

### MINEOLA, LONG ISLAND DEMONSTRATION PROJECT

SENATOR D'AMATO: Construction has been stalled on 5 at-grade railroad crossing elimination projects in Mineola, Long Island, because of disputes between the State and the local community over the real cost of the project. One of these 5 crossings (Herricks Road) has been rated by the National Transportation Safety Board as one of the most dangerous in the nation. New York State's original 1988 estimate of \$180 million has more than doubled to \$280-\$340 million. Fifty million dollars in Federal highway aid appropriated for this project is unspent. Will you help resolve this matter by assisting the State to obtain a new, objective cost estimate



(either from independent engineers, or from Federal Highway Administration)?

ANSWER: This demonstration project is being administered similar to other Federal-aid highway projects under the Federal-aid highway program. Decisions regarding use of the earmarked demonstration funding and scope of the project rest with the State as does the resolution of State-local issues. It is therefore appropriate for the State to prepare any needed estimates of costs for this project. If the State decides to pursue a project whose scope is beyond the present amount of earmarked funds, the added costs could come from other sources which could include regular Federal-aid highway funding as appropriate.

#### FUNDING OF TRANSIT PROGRAMS

SENATOR D'AMATO: We understand that the primary goal of the economic stimulus package is to award contracts and create new jobs before the end of the fiscal year. Your proposal increases federal investment to fully fund existing authorizations for federal highway and aviation programs, and increases capital funding for Amtrak, but federal transit programs were increased only half way towards full ISTEA authorizations.

Given the backlog of deferred capital investment in transit that is documented in USDOT's biennial report to Congress on the status and condition of the nation's transit systems, why wasn't a greater investment made in federal transit programs to bring them to full ISTEA authorizations?

ANSWER: The main purpose of the economic stimulus package is to create jobs quickly. The proposed increase in transit funds of \$752 million would provide a 22% increase over current levels. We think this is significant.

SENATOR D'AMATO: With the importance of improved transit services in helping metropolitan areas meet the goals of the Clean Air Act, shouldn't federal transit programs be fully funded in FY 1994 and beyond?

ANSWER: The current level of funding for transit programs is more than sufficient to maintain current conditions and performance, according to DOT's most recent needs report ("The Status of the Nation's Highways, Bridges, and Transit: Conditions and Performance," January 1993.)

The annual cost to maintain the condition and performance of the nation's transit systems is \$3.9 billion plus an estimated \$150 million to bring transit systems into compliance with the Clean Air Act. The current estimated capital funding from all sources for transit (including \$2.5 billion from State and local sources, consistent with historical matching rates), with the stimulus package is about \$6.1 billion in FY 1994. This overall funding level for transit capital could allow a significant improvement in the conditions of the

nation's transit systems and help to meet Clean Air Act goals.

#### DISTRIBUTION OF FEDERAL-AID HIGHWAY FUNDS

SENATOR D'AMATO: The material distributed to date on the highway component of the proposed stimulus package describes that States will have flexibility to allocate the additional obligation authority to the types of improvements most needed in their own areas. Many States have ready to go projects in highway categories that have little or no balances of available apportionments. Will your proposal allow States to use this additional obligation authority in any highway category regardless of whether it has a balance of apportionments?

ANSWER: The additional obligation authority can be used under the same conditions as the current FY 1993 obligation authority. We propose no changes to the way the current Federal-aid highway program, and obligation limitation operate.

SENATOR D'AMATO: If the answer is no, should we not provide those States that have been successful in using their balances of highway apportionments with some flexibility to temporarily transfer apportionment balances to the categories where they are needed most and produce the greatest job creation?

ANSWER: At this point we have not proposed such a provision. We are, however, surveying the States to determine whether there is a legitimate need for such a proposal.

#### HIGH SPEED RAIL INITIATIVE

SENATOR D'AMATO: I have read with great interest about the administration's intent to increase federal investment in High Speed Ground Transportation beginning in FY 1994. This overdue investment will help improve our intercity rail passenger technology, allowing higher speeds and offering a competitive service to overcrowded air and highway travel. While the stimulus package proposes \$188 million for Amtrak to make needed capital improvements, I am concerned that Amtrak is not committed to real technological improvements. In fiscal year 1991, I obtained \$14 million for Amtrak to use to develop a prototype lightweight, dual powered locomotive capable of speeds above 125 MPH. Incredibly, more than two years later, these funds have still not been spent. I urge you to help me and this committee to convince Amtrak to program these funds immediately for their intended purpose.

The High Speed Rail initiatives that have surfaced to date are not coming from Amtrak, but rather from the states. Would it not make sense to allocated funding for the development of high speed rail service directly to the states to encourage these initiatives rather than to Amtrak?

ANSWER: We anticipate that the new high speed rail funds would be made available to State and local agencies and to private entities. We expect that they will coordinate with Amtrak and freight railroads, as appropriate, in the development and implementation of their projects.

## QUESTIONS SUBMITTED BY SENATOR DOMENICI

### JOB CREATION

SENATOR DOMENICI: The President states in "A Vision of Change For America" that his \$26 billion economic stimulus package will create half a million jobs by the end of FY 1994. President Clinton's economic stimulus proposal focuses more broadly than on the traditional "jobs" programs, such as infrastructure spending on highways, mass transit, rail, and other capital intensive programs. However, I would assume that the most significant job creation is still associated with the various infrastructure spending.

Secretary Peña, would you please detail for the Committee the number of jobs that would be created for the specific stimulus items proposed to be funded in the transportation component of the Clinton economic stimulus package?

ANSWER: By the end of FY 1994, it is estimated (based on our anticipated outlay stream from the stimulus package) that about 72,000 direct and indirect jobs will be created: 58,300 by increased highway spending, 9,300 in mass transit, 1,400 through Amtrak spending, and 3,200 in the Airport Improvement Program.

SENATOR DOMENICI: What is the breakdown of jobs created during FY 1993 versus FY 1994?

ANSWER: We anticipate that more than 17,500 direct and indirect jobs will be supported by stimulus package funding in FY 1993, and another 52,300 jobs in FY 1994.

SENATOR DOMENICI: What is at the ratio of permanent jobs to temporary jobs under the Clinton "jobs" proposal for transportation?

ANSWER: The stimulus package does not target or require a specific ratio of permanent to temporary jobs. However, enactment of the President's long term investment proposal would help to sustain transportation funding and employment at roughly the levels supported by the stimulus package. This would tend to increase the likelihood that permanent jobs would be created.

### COST PER JOB FOR ECONOMIC STIMULUS PROGRAM

SENATOR DOMENICI: After Congress' last experience with a "jobs" bill in 1983, GAO concluded that it cost nearly \$4.5 billion to add only 35,000 net jobs to the

economy over the two-year period of June 1983 through June 1985. These jobs cost more than \$128,000 per job, or nearly four times more than the \$33,000 or so it cost the private sector at that time to create a full-time job.

What is the Administration's estimate of the cost per transportation-related job under its economic stimulus spending program?

ANSWER: The cost per job created is difficult to determine because factors such as local pay rates and skills demanded for a job vary. However, the Transportation portion of the stimulus package totals \$4.16 billion, and we are estimating that 93,800 jobs are created from 1993-1997, which comes to approximately \$44,000 per job. This number, however, includes non-labor costs such as materials.

In considering the cost of this proposal, it is important to keep in mind the improved infrastructure, reduced unemployment and a myriad of other benefits that will result from it. The cost of each job is not the best measure of the program.

#### FINANCING THE ECONOMIC STIMULUS PACKAGE

SENATOR DOMENICI: President Clinton proposes an FY 1993 stimulus package totaling \$26 billion in new spending and tax incentives that the Congress is being called upon to enact next month.

From the budget document released February 17th -- "A Vision of Change For America" -- it is clear how the President proposes to finance this economic stimulus spending package. There are essentially three options:

- o Uphold the existing spending caps established in the 1990 bipartisan budget agreement, and offset any additional domestic discretionary spending above the cap with other domestic program reductions. Similar restraint applies to mandatory and entitlement spending and increased taxes under the pay-as-you-go (PAYGO) system, with offsets required to finance new mandatory and entitlement spending and tax increases.
- o Declare these funding items as "emergency requirements" as allowed for by the BEA (i.e., a necessary expenditure that is sudden, urgent, and unforeseen, and is not permanent.) When designated as "emergency requirements" by both the President and the Congress, such expenditures can be approved outside the statutory spending caps.
- o Waive the Budget Act and bring down the "firewalls," or the three separate funding caps, and fund the stimulus package with the remaining spending authority for FY 1993.



How does the President propose to finance his economic stimulus spending and tax incentive package?

ANSWER: The President proposes to use the emergency spending exemption that is allowed for by the BEA -- just as it was used for the unforeseen needs of Desert Storm and Hurricane Andrew. A recovery that's putting too few people back to work is an emergency.

#### IMPACT ON THE DEFICIT

SENATOR DOMENICI: If one were to break down the "firewalls" for spending for defense, international affairs, and domestic discretionary spending that were established in the 1990 Budget Enforcement Act, as the President says in "A Vision of Change For America," the stimulus spending program of \$16.3 billion in new budget authority could be financed within the original "combined discretionary spending caps." However, this would be according to OMB's final sequester report, and does not reflect the scoring of congressional action, which shows only \$4.1 billion in BA and \$2.4 billion in outlays under the combined spending caps.

This difference is explained by congressional action in the FY 1993 budget resolution. Democrats insisted on reducing both defense and international affairs spending below the 1990 spending caps, so that these savings could be devoted either to additional domestic spending or to deficit reduction. When both the House and Senate failed to pass a bill to remove the firewalls, the savings below the 1990 defense and international affairs caps went, by default, to deficit reduction.

Doesn't it now appear that the proposed stimulus spending package is a clear choice between additional spending and larger deficits, and the chance to sustain deficit reduction that is never easy to come by?

ANSWER: No, we believe that both needs can and should be addressed. The President has laid out a strong, comprehensive plan for deficit reduction to which we are committed. At the present time, however, we have an economy that may have achieved a self-sustaining recovery, but that is operating well below its capacity. The unemployment rate is still higher than it was at the bottom of the recent recession, and inflation remains well under control -- in part, under intense pressure from imported products. The risks posed by a short-term economic stimulus are thus small; and the rewards -- a greater near-term economic growth and in forestalling any possible relapse into recession -- are significant.

SENATOR DOMENICI: With the financing of the proposed stimulus package either as an "emergency requirement" or within the "firewalls," is it not true that such spending will still add to the federal debt?

ANSWER: The stimulus proposal must be considered as part of a larger package -- one which includes spending reductions as well as increases. Overall, the plan will result in a decrease in the federal deficit by FY 1997.

SENATOR DOMENICI: Wouldn't you agree that adding another \$26 billion to the federal debt puts us further in the "hole" in achieving a credible and significant deficit reduction package over the next five years?

ANSWER: If Congress were being asked to enact the stimulus package without also considering a package of over 150 specific cuts, there would truly be a question of credibility. By submitting a balanced package, however, we believe this issue is addressed.

#### RATE OF RETURN FOR PUBLIC/PRIVATE INVESTMENTS

SENATOR DOMENICI: During the campaign, President Clinton advocated \$20 billion per year of increased investment in infrastructure, on the premise that such investment would yield significant increases in long term productivity. During the past few months, numerous economists have challenged that premise.

Do you subscribe to the claims that across-the-board increases in public investment in infrastructure would yield higher rates of return than the return to private sector investment?

ANSWER: The final answer on this issue is unclear at this point. While there have been some studies that have highlighted the importance of public sector investments, other economists question the results. We have underway within the Department analyses to address the impact of public sector investments. However, economists generally agree that public sector investments have an overall positive impact on the Nation's economic well being.

Public sector financed investment in infrastructure far outstrips private sector investment. While we look for opportunities for private partnerships, we can't count on the public sector for all our investment needs.

The President's proposal is aimed at achieving long term returns from investment in infrastructure. Transportation investments will significantly contribute to America's ability to compete in the global economy. This happens through the direct impact of such investments on reducing congestion costs and facilitating the production and distribution of goods and services. For example, the \$750 billion annual motor freight business is directly impacted by the conditions of the Nation's highways. Investments in highway infrastructure that reduce congestion, reduce the time required to truck goods, increase safety, and enhance service flow directly to the "bottom line" in reduced costs, making our goods more competitive and increasing the rate of return on investment.

#### GROWTH IN DOMESTIC SPENDING

SENATOR DOMENICI: Throughout the campaign and still today, we hear about the need to "invest" in human and physical infrastructure, even as we try to control

the deficit by shoring up revenues and making the "rich" pay their fair share.

Are you aware of the trend of Federal investment in programs such as infrastructure, as well as education, grants-in-aid to State and local governments, and research and development -- the so-called "investment" programs?

ANSWER: I am aware of the trend in Federal infrastructure investment. Based on last year's CBO report on trends in public infrastructure, over the 10 years between 1980 and 1989, total capital infrastructure spending by Federal, State, and local entities increased by about 23% in real terms. For the highway, transit, aviation and rail programs, spending grew by 31% over this time frame. For the Department of Transportation, spending for our major capital grant programs in highways, transit, and aviation increased by about 15% over the last four years.

SENATOR DOMENICI: How has the growth in Federal spending for these [infrastructure] programs from 1989 to 1993 compared with the previous four years?

ANSWER: While I can't speak to the non-DOT infrastructure programs, growth in spending (outlays) between 1985 and 1988, and between 1989 and 1992, inclusive, for the major DOT infrastructure programs is:

	<u>1985/88</u>	<u>1989/92</u>
- Highways	8%	14%
- Transit	-1%	4%
- FAA Airports	5%	47%
- FAA Facilities and Equipment	145%	73%

SENATOR DOMENICI: What indication is there that even greater increases in these "investment" programs would contribute more to the Country's long-term economic health than reducing the size of the Federal deficit?

ANSWER: The President's plan is aimed at reducing the deficit while increasing much-needed public investment. One will not work without the other. The benefit from deficit reduction is the resulting additional private investment. However, the private sector needs tools that the public sector can provide, such as the nation's highways, upon which to build business.

#### CONCLUSION OF HEARINGS

Senator LAUTENBERG. This subcommittee will stand in recess until Tuesday, March 4, when we will have a hearing on high-speed rail in this same room. Thank you very much for being with us.

Mr. PEÑA. Thank you, Mr. Chairman. Thank you, Senator Har-  
kin.

[Whereupon, at 11:14 a.m., Tuesday, February 23, the hearings  
were concluded and the subcommittee was recessed, to reconvene  
subject to the call of the Chair.]

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ISBN 0-16-040735-4



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